

# MOTOR TREND

MARCH 1961 35¢

SPECIAL  
Award  
Issue

1961

CAR OF THE YEAR  
PONTIAC TEMPEST

UNPRICED CARS  
Automotive Research Library  
★ PETERSEN PUBLISHING CO.





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# FALCON-ENGINE PUMPKIN SEED HITS 205.949 WITH AUTOLITE SPARK PLUGS

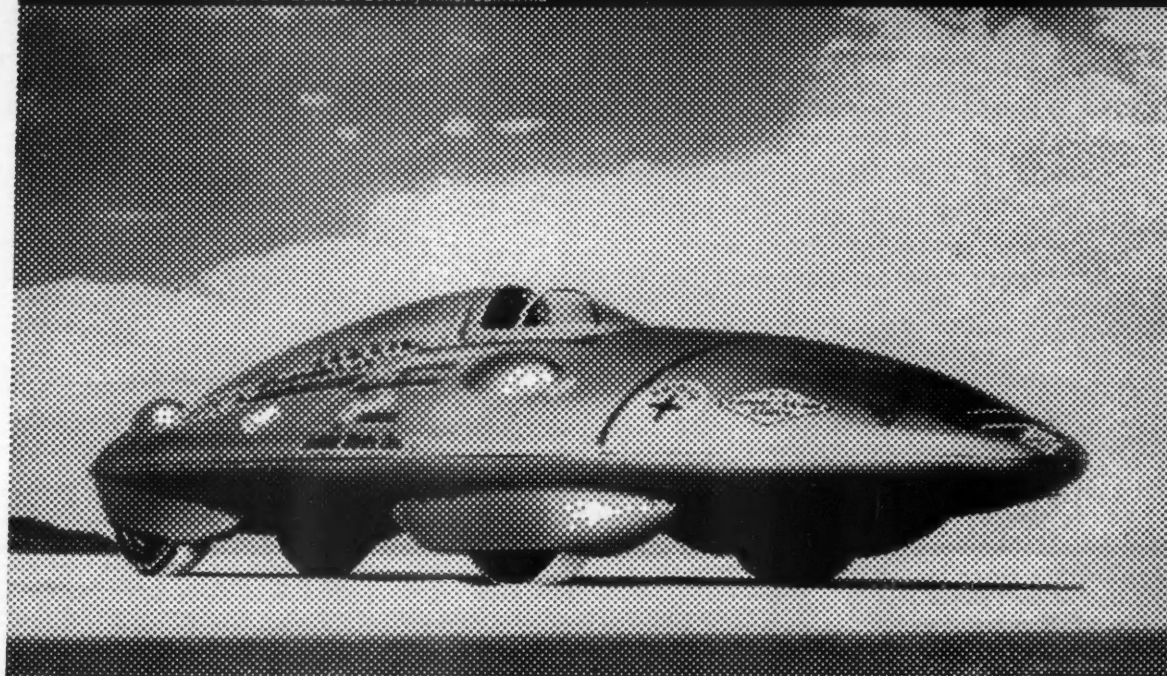
Pumpkin-seed-shaped SCI Special slices to Class D record of 205.949 miles per hour across the salt of Bonneville, smashing the ten-year-old mark by over 43 mph. The engine: a 156-cube Ford Falcon in-line six. The spark plugs: Autolite. Lesson for the day?



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# MOTOR TREND

MARCH 1961

VOLUME 13, NO. 3

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**This month's cover features** a portrait of the Pontiac Tempest in action. A report on the Car of the Year Award winner begins on page 22. Photo by Ralph Poole.

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# Tempest puts safety-minded performance in a gas-saving 4!

(Range of horsepower choices from 110 to 155)

Take a Tempest out on the highway and put it through its paces. This car is a whiz at moving into fast-stepping company on an expressway. Takes you from a standing start to a safe operating speed in seconds . . . gets you up a steep hill in high gear.

Run the Tempest over the roughest road you can find. It rides like the big ones because it's balanced! The engine's up front —the transmission's in the rear.

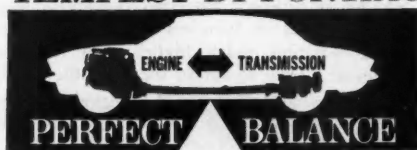
And it's got independent suspension at all four wheels. Full 15-inch wheels make car look big. Tires last. Brakes run cooler.

Before it hit the market, Tempest had 3,000,000 miles of testing by engineers, pro drivers and a team of teenagers. Its reliability checked out 100%. Owners have rolled up millions more. The only kick is the one it puts back in driving. Try it!

PONTIAC MOTOR DIVISION • GENERAL MOTORS CORPORATION



**THE HOT TOPIC IS THE NEW TEMPEST BY PONTIAC**







## MEMO FROM THE EDITOR

DON WERNER

**S**OON AFTER PUBLICATION of the January issue of **MOTOR TREND**, there were protests that the fuel consumption figures reported in the road test of the Datsun Bluebird were not typical of those obtained by Datsun owners and drivers.

A retest of the Datsun obviously was in order. So a Datsun sedan was obtained for the recheck and it was carefully examined to make certain it was in stock condition, correctly tuned and, very important, that it was equipped with the standard rear axle ratio of 4.625.

I then took on the assignment of checking the fuel consumption. It involved nearly six hours through heavy city traffic and over two hundred miles of open highway. The fuel consumed was then computed and averaged out to precisely 29 mpg.

That fuel economy is vastly better than the figures reported in the first test and closer to what most Datsun owners claim. My own test, after the city traffic section was at a steady 60 mph on the open highway. A lighter throttle foot, and a pace in, say, the 40-mph range, obviously would have reduced the fuel consumption even further and produced an average mpg in the 30's. But most travelers on the open road hold closer to

and controlled conditions, our **MOTOR TREND** road tests have gone back to the basic and simple system employed by car drivers ever since the automobile evolved. The test editors of our staff merely keep a careful record of the tank refills. After an adequate number of miles have been covered, at least several hundred and sometimes it runs into thousands, the total number of gallons consumed are divided into the total mileage.

The only refinement—and it obviously is an essential step—is the correction of the car's odometer. In many cases, the odometer error is substantial and may be as high as ten to 12 per cent. The odometer correction, along with the correction of the speedometer (for acceleration tests), is accomplished electronically.

As part of the test equipment, the **MOTOR TREND** editors use a Berkeley counter, which actually is a digital totalizer. It runs off a geared fifth wheel, which in turn is attached to the rear bumper of the test car. The Berkeley unit counts the number of feet the wheel turns by registering one impulse for every foot of wheel travel. In a single revolution of the fifth wheel, there are seven impulses and the Berkeley is capable of 100 counts per second—which means it is effective up to 70 mph. The degree of error in the counter-fifth wheel combination is less than one per cent, an amount that is relatively insignificant in computing overall fuel economy.

It has been pointed out often in **MOTOR TREND** in the past that the odometer errors in imported cars are generally slight, and many of them are close to 100 per cent accurate. The great errors occur in Detroit-built cars, and while there are several possible explanations for this, one of them certainly is the fact that a majority of the domestic cars come with such a wide variety of rear axle ratio options and the odometers are not adjusted for the differences.

/MT



*The Datsun Bluebird shows true economy in retest.*

60 mph than they do to 40, so my test was probably typical of the majority of drivers.

The discrepancy in the fuel consumption figures in the first test report may have resulted from any one of a number of factors. Some explanation of the **MOTOR TREND** procedure in testing for fuel economy may be a good idea at this stage.

There are two general ways of checking cars for fuel economy. One is the use of a metering unit that measures the amount of fuel consumed by the engine while the car is being driven.

We have such equipment on hand at **MOTOR TREND**, but I have never favored its use. My experience is that fuel test meters are not suitable for extended periods of driving. And if only short distances are involved in the test, highly unrealistic figures result—figures much higher than the average driver ever achieves. I have found in the past, for example, that a typical big V-8, that at best might obtain 15 mpg, in a short run at steady speeds with a fuel meter will obtain as high as 25 mpg with no effort at economy.

So instead of measuring fuel consumption under such limited



*Motor Trend's fifth-wheel speedometer is held by test crew. On floor is Berkeley Counter, used to determine accuracy of the car's odometer.*





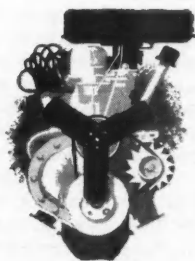
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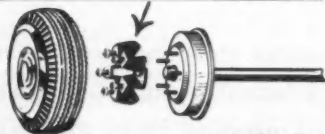
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# Letters

## "CAR OF THE YEAR"

Why hasn't the car that revolutionized the automobile industry ever won the Car of the Year award?

It brought down the size of cars, reduced horsepower, popularized the six-cylinder engine and made the American motorist more aware of economy.

Today, all of the automobile companies are following in the footsteps of the originator.

I'm talking about the *Rambler*.  
Kenneth Louis

As the time draws near for you to choose your annual Car of the Year, I have noticed many letters stating that Rambler should get the award. I do not think so at all.

Rambler has absolutely no advanced engineering features (certainly no new ones). *Maybe* it did scare the Big Three into making compacts, but that was to come sooner or later, anyway.

In my opinion, either Pontiac Tempest (for its transaxle, V-4, etc.) or Buick (for its aluminum V-8) should receive this coveted award.  
Ralph Cutler

Delhi, La.

*The guessing game is over. For car of the Year see page 22.*

## WHAT IS COMPRESSION RATIO?

I would appreciate your giving me the formula for the compression ratio — 8 to 1, etc. Eight *what* to one *what*? And how does that ratio compare with the psi?

John Martin Bakersfield, Calif.

*Compression ratio is the ratio between the difference in volume of one of the cylinders with the piston at bottom dead center and at top dead center. The psi method is just another way of calculating cylinder volume pressure.*

## BEST WISHES TO '61 BUYERS

I am one of those who are hoping that the advertised liberalization of warranty terms truly reflects the manufacturers' confidence in their new models.

I have owned a \$7,000 Detroit luxury car for a year now, and for 15,000 miles. I can reflect upon this interesting record:

- An inoperative fuel gauge
- An inoperative speedometer
- Faulty connections on rear lights
- Replacement of voltage regulator
- Replacement of generator
- Removal and repair of radiator
- Repair of air conditioner evaporator

- Replacement of rear shock absorbers
- Brake reline
- Another repair of radiator
- Another replacement of voltage regulator
- Power brake malfunction

These items were, of course, in addition to routine maintenance and tune-up.

My best wishes to the '61 owners. May the confidence in better engineering and workmanship come from the factories — not just the ad agencies!  
W. N. Los Angeles, Calif.

## ANOTHER FORD "FIRST"?

In your January issue in "Motor Trends," I see that Ford is again getting credit for something they didn't do — the item titled "New Warranty, Ford Victory."

If the truth be known, the victory belongs to American Motors, who announced the one-year, 12,000-mile guarantee with their 1959 models. (But without the fanfare that Ford always enjoys.)

Just as all of the firsts usually come from the independents without fanfare, so it has happened again.

P. R. Gilbert Lakewood, N. J.

## FOUR-DOOR VW?

Your January issue states that the Volkswagen you tested was a four-door sedan. How long have you been counting the hood and trunk lids as doors?

Seriously though, if they *would* punch four holes in that little beetle instead of only two, I would buy one in a minute. In the meantime, I will go on enjoying my very satisfactory Dauphine.

L. A. Law  
*We erred.*

## BLESSINGS OF SECOND GEAR

In the Ford road test in your January issue you state that there is no advantage in having a D-2 position on the Cruiseomatic transmission indicator. I think that the Ford people had the same idea that the Studebaker people did when they adapted their three-speed automatic to the Lark V-8.

On wet pavement I cannot start my car in LOW gear, but when I put the lever into DRIVE, with its second-gear start, I do *not* spin the rear wheels. It is almost impossible to start on ice in LOW range. (Of course, if you floor the accelerator in DRIVE range, you can start in first gear.)

Also I have found it necessary to put 100 pounds of bar-bell weights in the trunk to aid in rear-wheel traction on anything but dry pavement.

This is the penalty we have to pay for powerful engines and heavy front ends, with too little weight in the rear. Possibly transaxles and the semi-locked differentials with light aluminum engines

up front will solve the weight and traction problem. Until then — thank God for the second-gear starts!

Arthur Kaufman Rego Park, N. Y.

#### CROOKED DRIVESHAFTS

In your feature article, "What's Right and Wrong with the '61 Cars" (Jan. MT), John Lawlor states his dislike for crooked driveshafts and leaves the reader with the impression that the sole purpose of the Tempest's bent drive-shaft is to flatten the interior floor.

I would like to point out that the few degrees described by the shaft aid this purpose only slightly; its main function is to eliminate critical vibration points, leaving only second-node vibrations to be controlled by two damper bearing blocks fitted inside the torque tube.

Don Meredith Green Camp, Ohio

#### BREACH OF ETIQUETTE

We couldn't resist answering "A Frustrated Motorist," who had reason to be ashamed to sign his letter in your January issue.

To call a Thunderbird a "Polyethylene dishpan" is an unforgivable breach of automotive etiquette. In our opinion, the '61 T-Bird is Ford's supreme achievement. This man, or woman, as the case may be, is evidently a professional second-guesser and a frustrated amateur car designer who doesn't know a good thing when he sees it. This car is the best we've seen from Ford for years.

To say that the Lincoln looks like "H....l" is enough to infuriate any fan of good, clean, sensible, classic styling, of which the Continental has always had its more-than-fair share.

To say the Cadillac looks like a hearse is nothing new for that make, as they have for years been a magnificently subdued and stately automotive masterpiece. A Cadillac, as well as Continental and Imperial, should always be a creation of dignity and elegance, without flamboyant extras.

John D. Brandes East Cleveland, Ohio  
Allan T. Spencer

#### MELTING BALL OF WAX

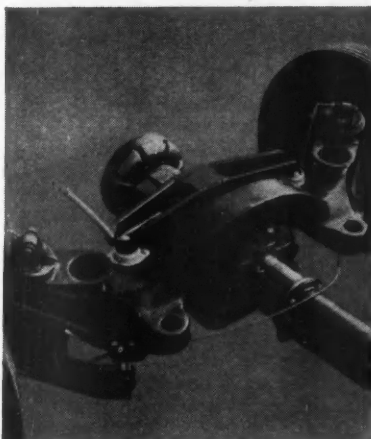
Now that the Thunderbird has lost its crispness of design and taken on the appearance of a ball of wax that has just started to melt, I would like to know what chance we have of saving it before it becomes another carnival of gewgaws. In short, can the trunk deck and taillights of the '61 T-Bird, its only redeeming features, be made to fit the '59 or '60 T-Bird? If this can be done, it may be possible to salvage something by combining the two.

The rear of the '59 and '60 Thunderbirds, with the four and six taillight treatment, had all the charm of a pinball machine in full tilt; however, the

*continued*

# Test your sports car IQ!

QUICK QUIZ BY QUAKER STATE



1. Can you name this type of drive, recently introduced in America?



2. Not "sports car," but sport—what kind of race is being held here?



3. What is the name of this famous racing oval?



4. What does this symbol stand for?

THE symbol stands for the complete engine protection you get with Quaker State Motor Oil. Super refined from 100% Pennsylvania Grade Crude Oil, Quaker State keeps your car on the road, out of the repair shop. Insist on Quaker State—available most everywhere. For the name of your nearest dealer, call Western Union and ask for Operator 25.



Answers: 1. Transaxle (illustrated: 1961 Pontiac Tempest). 2. It's a Drag Race. 3. Indianapolis Speedway. 4. The world's finest motor oil.

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1961

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**LOS ANGELES COUNTY  
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## Letters *continued*

rest of the car turned out surprisingly well.

It's amazing how Detroit's designers just can't let the good features alone. This change for change's sake is pretty absurd. Just because something is different doesn't necessarily mean it's better. William E. Cochran Berkeley, Calif.

### WAGON PREFERENCE

Two letters in the January issue have inspired me to write a few words on the other side of the matter of the rear openings of station wagons.

We bought a '56 Ford 8-passenger wagon new in Ohio and put 24,000 miles on it, then sold it and bought a new '57 Plymouth 9-passenger and put 18,000 miles on it. We liked the Ford very well and had good service from it, but we liked the Plymouth so much better that when we sold it we replaced it with a '59 Plymouth. At present we have almost 32,000 miles on this one. In addition, we had a used '55 Rambler four-door wagon long enough to put over 10,000 miles on it.

As a result of our experiences, I can say that we have found the Plymouth arrangement far superior for our needs. The electric tailgate windows have never given any trouble and act with satisfactory quickness. They never cause me to bump my head as did the lift gates. Weather protection by a lift gate is incomplete at the gap between the gate and the body. The lift gate hardware is a hazard for small children riding in the back with the gate closed. We have no desire to have a lift gate again.

So far as the rear-facing third seat is concerned, we have found the Plymouth arrangement to be entirely satisfactory. Six-footers like myself can ride in more comfort than in the Ford. Conversion to a flat bed is simpler and quicker.

Incidentally, I was sorry to see Chrysler Corporation return the spare tire to the interior, since we can put two sizable suitcases under the third seat of our '59. The one flat tire I had with the Plymouth was in a driving rain and I was most thankful that I didn't have to expose the inside of the car to the rain to remove the spare and put the wet and messy flat tire in.

Bryan A. Michaelis, M.D.  
Redlands, Calif.

### A GREATER COUNTRY?

This is in reply to the valuable observations by Frank W. Honey in a recent issue that America is a great country — where else can you buy a '52 Studebaker V-8 that runs well for \$100, or a '50 Stude convertible for \$40?

I would like to mention that in

Sweden you can buy a '54 Stude V-8 for \$250. And I don't think you could even find a buyer for your '50 or '52 Stude.

Does the greatness of a country depend upon the price of second-hand Studebakers?

Ove B. Daniels Gothenburg, Sweden

### NATIONAL AUTORAMA

The 11th Annual National Autorama will be presented in the Connecticut State Armory, Hartford Conn., February 22 through 26.

The Autorama will consist of more than 125 selected automotive masterpieces. The cars, all privately owned vehicles, will include rare antiques, classics, fabulous customs, dream cars, record hot rods, race cars, motorcycles, sports cars, karts, motor equipment and accessories. In addition, an ever-popular feature of the show is the Autorama Theatre, where the very latest race films of the outstanding national and international events are shown continuously.

Joe Kizis Milford, Conn.

### COPYCATS

I enjoyed your recent article criticizing the styling of the 1961 cars. However, I feel that you overlooked one point — the great similarity among some of the '61 cars and past models of competitive manufacturers. Here are a few examples of what I mean:

Typical of my theory is the '61 Ford. Its basic body design, particularly its grille and hood lines, are predominantly those of past Cadillacs. On the other hand, the front ends of the Buick and Buick Special strongly resemble the '60 Fords.

Another example is the Lancer. Its front end, and taillights too, are definitely those of the '60 Pontiacs. Its taillights appear to be exactly the same as those used on '60 Pontiac station wagons.

Now, there is nothing wrong with the exchanging of ideas. In fact, I favor this blending of the better features of one car with those of another. But it does raise the question in my mind of whether Detroit manufacturers swap their styles for those of their competitors, or were these similarities purely coincidental?

Richard Dadowski Pittsburgh, Pa.

### WHAT HAPPENED TO GM?

What happened to all the so-called GM styling talent?

With few exceptions, from Cadillac down to the Corvair (Corvette excepted) all the GM cars have that stepped-on-tin can look. The Cad has a nice Falcon-like grille, but why the fish-sided profile?

Do we make so many yearly changes that we are beginning an era of confusion in trying to update each year's new model?

However, there are some bright spots.

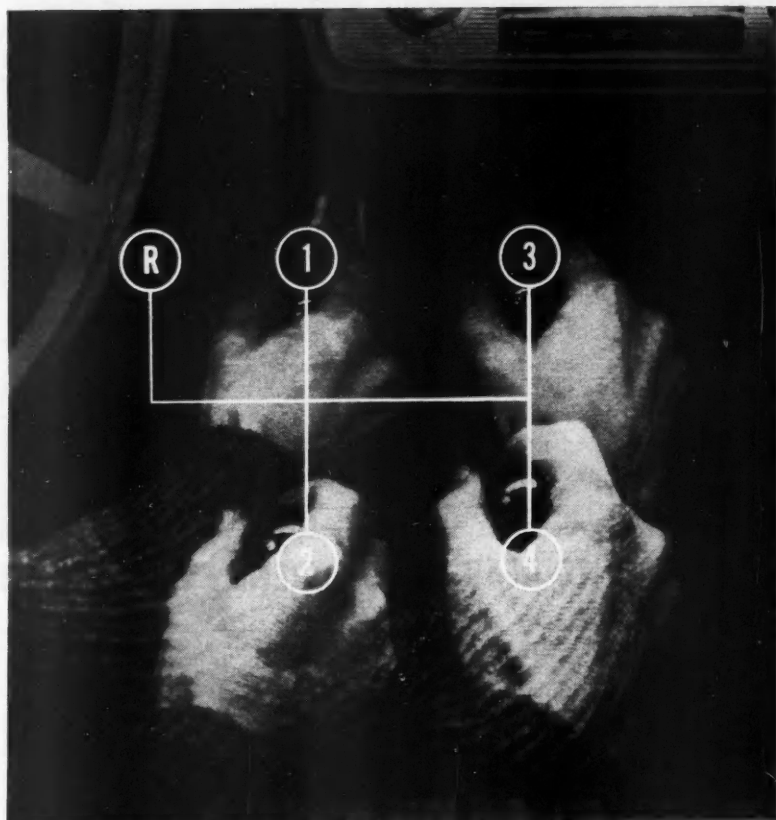
*continued on page 12*



## '61 CHEVY CORVAIR: THREE TRANSMISSIONS

You know, one extremely pleasant thing about Corvair is its versatility. For instance, take transmissions. You can, of course, choose the standard three-speed box or Corvair Powerglide\*.

But the big news (fanfare, please) is our new floor-mounted all synchro-mesh four-speed transmission\*. Essentially, it's patterned after the design you'll find on many a Corvette—and the experts say that one's among the best in the business. For the technically minded, Corvair's four speeds line up like this: first, 3.65:1; second, 2.35:1; third, 1.44:1 and top

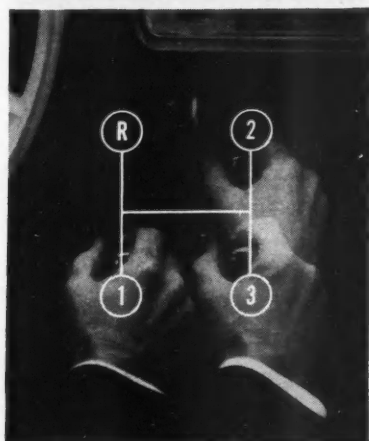


1.00:1. Nicely spaced, superbly supple.

Now, maybe you figure a four-speed gearbox gives you just another gear to shift. But then maybe you've never dropped your hand onto a palmful of pure driving sport. Frankly, though, it's next to impossible to sell you on an outfit like this in words.

You've got to sell yourself—which you'll probably do, once you've had a taste of it. At your Chevrolet dealer's. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

*\*Optional at extra cost.*



The lively Corvair 700 Club Coupe

Corvair, you know, is still the most advanced car in the land—and we've had a solid year to refine those engineering marvels: independent suspension all round . . . air-cooled aluminum engine in the rear and all the rest. Check into it—and while you're at your dealer's, get a load of that Greenbrier Sports Wagon!



## IT'S SMART TO READ MOTOR TREND EVERY MONTH

1. **DIRECT DETROIT PIPELINE**—bringing you an exclusive monthly report on all the very latest news happenings in the motor city. If it's recent and vital and if it originated from Detroit, here's a magazine specialty we're proud of... read all the details first in **MOTOR TREND**.
2. **ON-THE-SPOT EUROPEAN COVERAGE**—bringing you a most unique brand of "round the clock" reports on major European automotive events. Read the news now, when it happens—not some vague and hazily distant date in the far-off future... read all the details first in **MOTOR TREND**.
3. **CURRENT CAR-BY-CAR SPECIFICATIONS**—bringing you down-to-earth comparison charts and specification reports on all the current car models. If you're looking for a dependable analysis of some specific model's potential... read all the details first in **MOTOR TREND**.
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### Letters

*continued*

The new Lincoln and Thunderbird do more for me at one glance than a starlet in a Bikini. These are magnificent motor cars, both svelte and delicious, coming or going. Maybe they show just a little Italian influence—but that's good.

Chrysler Corporation also has out-punched GM with some very desirable merchandise. Plymouth is somewhat of a weak sister in styling, but the Dart and the rest of the line compensate for this.

Woodrow Knox

Perryville, Mo.

#### PLYMOUTH FOUR-CYLINDER CLUB

I would like to announce a change of address for the Plymouth Four Cylinder Owners Club. The new address is:

Jay M. Fisher, Director  
24 Elmwood Road  
Florham Park, N. J.

This organization is open to all owners, former owners, and those sincerely interested in 1928-'32 four-cylinder Plymouths and 1933-'34 six-cylinder models.

Jay M. Fisher

Florham Park, N. J.

#### FORD COOLING SYSTEM

I am having quite a bit of trouble with my '57 Ford cooling system. It is a stock 212 engine with two-barrel carb.

I have taken it to several different shops with no luck. All they have done to it put one thermostat in, one pressure cap, two new hoses, flushed out the radiator and block and put in some anti-rust compound—and it still isn't cooling off.

I thought some other person might have the same trouble, and you could help me.

Larry Day

Morgantown, Ky.

*There is a strong possibility that the cause of your overheating problem is a leaky gasket or cracked head. If water must be added quite often even when the engine hasn't overheated and if there are no external leaks, it is reasonable to assume that combustion gases are leaking into the cooling system. These gases not only heat the water but cause it to be forced out of the overflow pipe.*

#### SPEEDOMETER ERROR

I recently pulled the Fordomatic in my '55 Crown Ford in favor of an overdrive. Since I am mainly concerned with good high (extremely) cruising on the highway, I left the same rear end in.

Is speedometer error affected by this? I have been unable to check it out to my satisfaction.

Duff J. Kelly

Columbus, Ga.

*Unless you are using the same speedometer gear ratio with the overdrive transmission as was used with the Fordomatic, the meter will not read correctly.*

## GOOD IDEAS, BUT...

It seems to me that the Studebaker-Packard Corporation is an organization of good ideas, but presented in the wrong manner.

In 1953 they brought out a beautiful design as close to perfect as an automobile could be. But it failed and lost \$-P millions, and would have killed them if it weren't for Curtiss-Wright.

In 1955 Chrysler brought out their cars patterned after the Stude, especially the Dodge, which borrowed everything from the split grille to the rear window. These cars brought Chrysler out of their financial hole. Exner did not make the mistakes of Loewy.

I don't believe the Stude failed because it was too far ahead of its time, or because it was too clean and simple, but because it could hold only four passengers with comfort at a time when everybody was buying six-passenger cars.

In 1956 they made the same mistake Chrysler made after the failure of their Airflow models. The Studebakers were too conservative, well balanced but without distinction, a "no nonsense" car with only a few minor unique features.

From 1956 to the present, the Hawks have been sporty models, usually bought by the family man with two kids, who wants something sporty.

Again Chrysler took a Loewy design and put it to their own use. Instead of a sports-like four-passenger car, they brought out a sports-like compact car, the Valiant.

The Lark is a simple car, but it is from five to nine inches shorter than its competitors. I can't help thinking how much better looking it would be if it were a few inches longer. Of course, it's easier to park the size it is, but anybody who can't park a 190-inch car should throw away his license.

It is my personal belief that \$-P would have a salable full-sized car if they took the Hawk, stretched it six inches, and widened it five — they would have a distinctive sports-like car for six.  
Tom Maylone Robins AFB, Ga.

## FOR EVERY NEED

Studebaker is the only company on the market today offering cars to fit nearly every need.

For those who want economy, that little Six will give them plenty of it — with great performance to boot! For those who want luxury, take a look at that Cruiser. And for the sports car-minded, you can't beat that Hawk with the all-synchronized "four-on-the-floor."

The Studebaker may not be as fast as a Chevy, Pontiac or Corvette, but where can you find a car that offers five-passenger comfort, sports-car styling and handling, plus excellent workmanship for such a low price?

Larry Blatt

Philadelphia, Pa.

Now... You, too, can have a car that

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Power Steering: Yes . . . . . No . . . . .

Engine: 6 Cylinder . . . . . 8 Cylinder . . . . .

NAME . . . . .

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CITY . . . . . STATE . . . . .

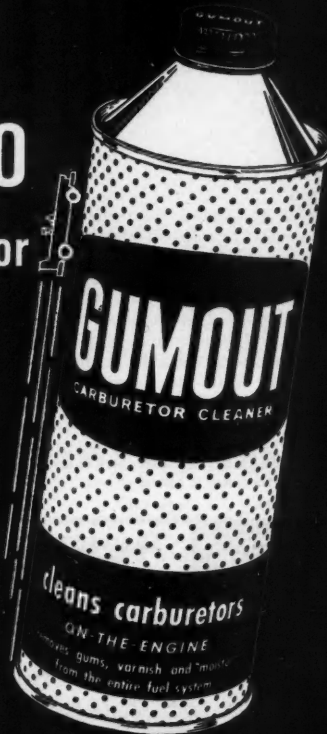
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Never before in motoring history has the connoisseur of fine-engineered, precision-built machinery seen such a compact package of pulsing power mounted in frame or chassis . . . two-wheel or four!

Tops in speed, stamina and roadability, new '61 world-famous Triumph models are ushering in a new era of 'cycling excitement!

Road and competition models of unsurpassed maneuverability, power and all-around performance are among the new Triumphs for 1961. Write for detailed mechanical specs. See your Triumph dealer for FREE demonstration ride!

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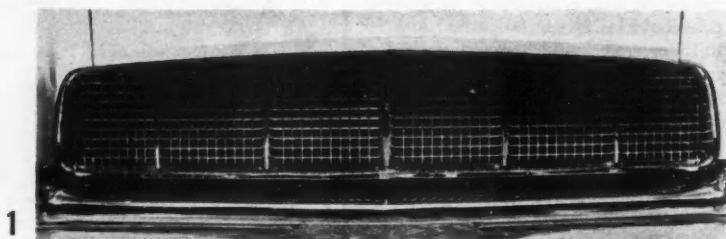
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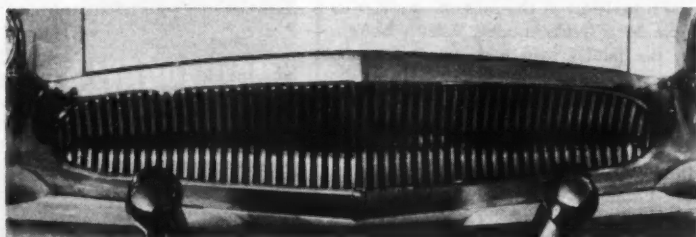
# CAR QUIZ



1

THE TRADITIONAL WAY of recognizing any car is by its frontal styling. In the early days of motoring, each make had its distinctive radiator shape; more recently, each has had its characteristic grille treatment. Of the seven grilles shown here, how many can you identify by make and year?

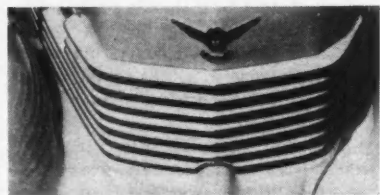
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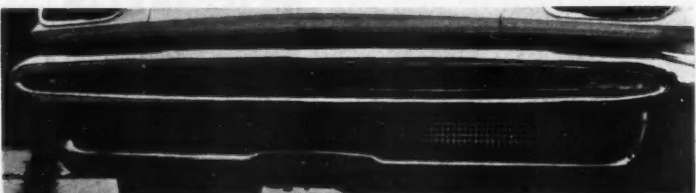
3



4



5



6



7

See page 82 for answers.





## **This Tri-Power Pontiac packs one horse for every 10½ pounds**

**Figure it out for yourself: a Catalina Sports Coupe at 3680 lbs., powered by the 348 H.P.**

**Trophy V-8 = 1 H.P. per 10.57 lbs. Even most sports cars wish they could match it!**

We trimmed off every bit of excess weight. There's less weight over-all and more of it is sprung between the wheels for a lot better balance.

Make no mistake: This is a big car—nearly 4000 pounds worth of solid road machinery, give or take a few depending on model and equipment. But the pay-off is how Pontiac moves its weight.

The 348 H.P. Trophy V-8 puts out one horse for every 10½ pounds. And other Pontiac V-8's (11 in all to choose from) have power-to-weight advantages that come close to matching it.

Stack Wide-Track up against all the others and you'll see no other car packs or pulls its weight so well. Test for yourself at your Pontiac dealer's.

PONTIAC MOTOR DIVISION OF GENERAL MOTORS CORPORATION

# Motor Trends

Chevrolet is believed to have two new aluminum engines aimed at the 1963 models. One will be a Six, the other a four-cylinder model. Exactly what kind of vehicle will be powered by the Four is not clear now but the report leads to interesting possibilities.

Those smaller small cars are being groomed for very early introduction, probably this coming fall. Furthest along is the not-too-secret Ford Cardinal, but not too far behind are little ones from American Motors and Studebaker-Packard.

Speculation repeatedly appears in the automotive trade press to the effect that Studebaker-Packard may discontinue its car manufacturing operations. Denials from South Bend have been loud and firm. If S-P is in trouble, the fault is not with the '61 Lark—the best car the firm has had in years.

Look for a deluxe version of the Falcon to show up soon. Ford apparently is envious of the success Chevrolet has been enjoying with the Monza version of the Corvair.

More compact cars of the current size are in final design stages at GM, Ford and Chrysler. The compacts, as often predicted, are rapidly becoming the standard dimension for domestic cars. There's hardly a car on the drawing boards that approaches 200 inches in length.

Ford's new automatically adjustable valve lifters—expected in the 1961 models but delayed because of manufacturing difficulties—are now reported ready for the '62 season. The new design is less expensive to make.

Despite many rumors of a quick revival of the De Soto name on a new type of vehicle, most authoritative sources are certain that the famous old name is out of the Chrysler picture—at least in the foreseeable future.

Is there a trend to larger wheels on compacts? The Tempest's introduction of 15-inch wheels on a car that called for the 13-inch variety has created quite a stir. There are many who like the appearance, greater ground clearance and handling qualities of the big wheels. Now Buick has them as an option on the Special. Word is that Olds will do the same with the F-85.

Chevrolet's new 409-cubic-inch high-performance engine option may be pushing Ford toward a four-speed transmission option. The 390-inch

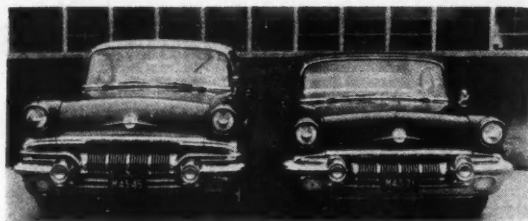
Fords with the three-speed box could usually handle the 348-inch Chevys on the drag strips, but now it is going to be touch and go. Pontiac found that the four speeds knocked a good half second off their e.t. Ford has had these gearboxes under experiment for a year, but recently shelved the plans. Now watch for a revival.

From this distance it appears that 1962 will be a big year for engines. Each of the Big Three auto makers has new designs in preparation. One of the big influences, of course, is the increasing use of aluminum. Another is the new race toward a revision in driveline layouts, which has been stimulated by the advances of the Corvair and Tempest.

American Motors has extended its 12-month or 12,000-mile warranty to its imported Metropolitan 1500's. The same firm has also announced that their new ceramic-coated mufflers and tailpipes are now available for replacement in past year Ramblers with a life-time warranty for the buyer.

New tubeless experimental tires made of specially compounded Neothane, a polyurethane rubber used for gaskets and solid tires, could revolutionize tire manufacturing in the next decade. This colored translucent tire, made by pouring the ingredients in a mold, like molten steel, is noted for its puncture resistance, resilience and high load-bearing capacity. It will mean that stylists can carry the car's color scheme right down to the pavement.

Next national automobile show has been scheduled for the fall of 1962 in Detroit's Cobo Hall. The first national show in Detroit, staged last fall, was considered an outstanding success. The Automobile Manufacturers' Association, sponsor of the show, has decided to skip the event for 1961.



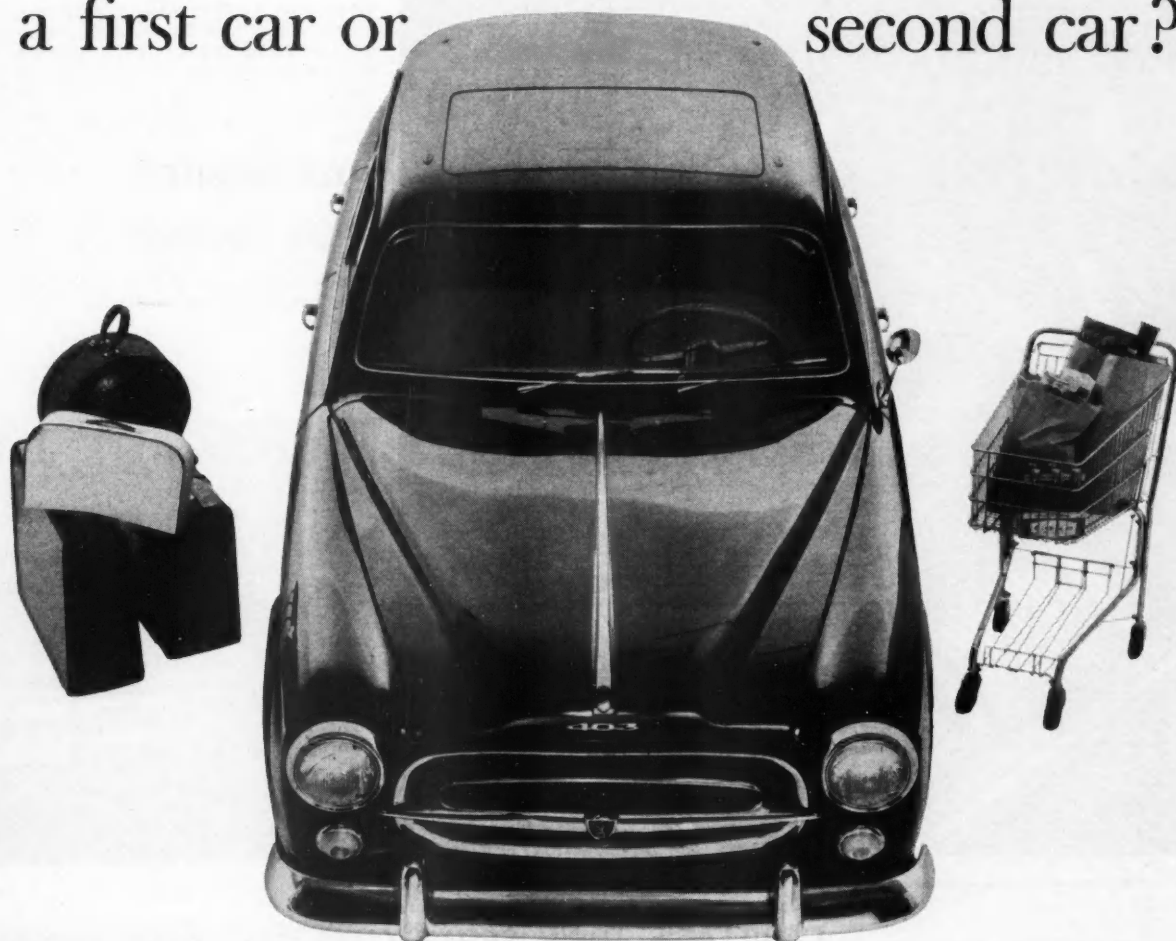
First photo of a revolutionary experiment. The Pontiac at the right was the first car ever equipped with a flexible driveshaft (now on the Tempest). Note how much lower it sits than car at left.







Is the Peugeot 403  
a first car or second car?



The Peugeot 403 is a first car. The only second car a Peugeot owner needs is another Peugeot. It has first car size and comfort: And it *looks* like a first car: no fins; no excessive trim; no strange shapes. 🦊 The 403 also has many second car economies—low initial cost; 30 mpg on regular gas; very low upkeep. 🦊 The Peugeot 403 is sold completely equipped. A sliding metal sunroof, heater-defroster, whitewall or Michelin X tires, four-speed synchromesh transmission, reclining seats, and many other “extras” are included in the price.

SEDAN \$2250

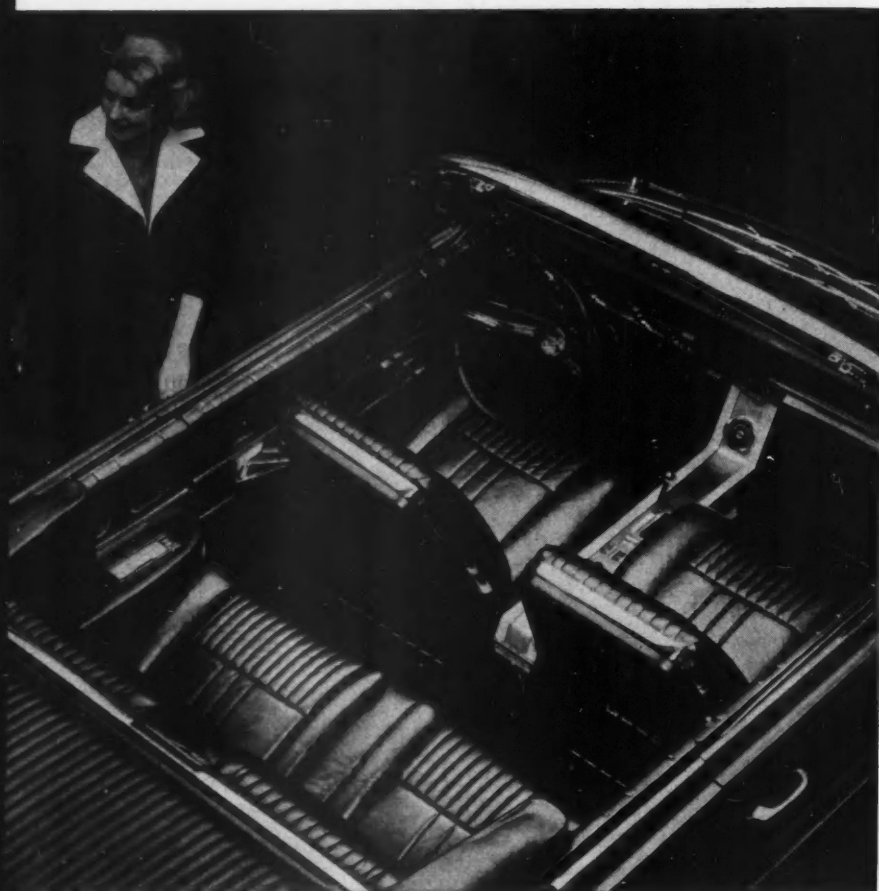
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## Motor Trends in Pictures



**OLDSMOBILE'S  
NEW STARFIRE**



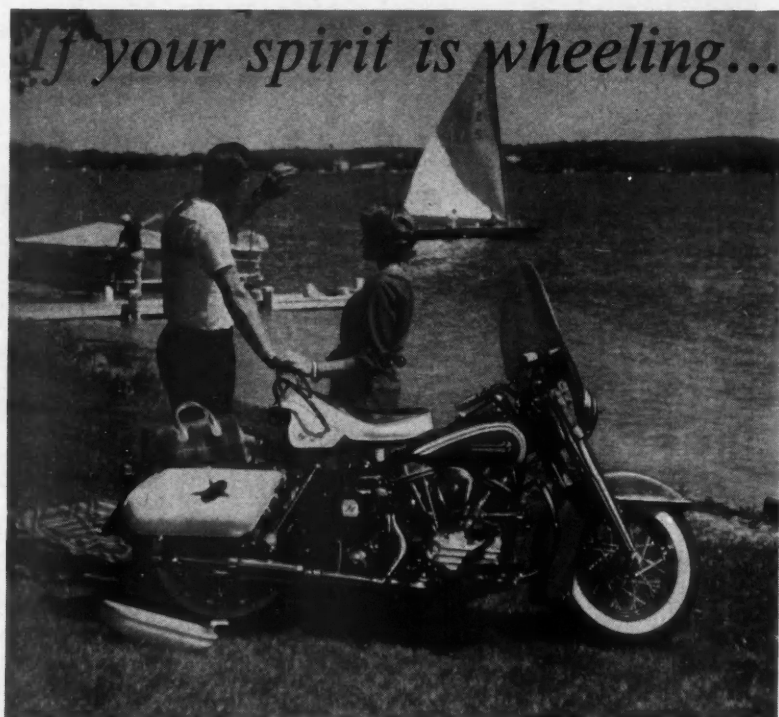
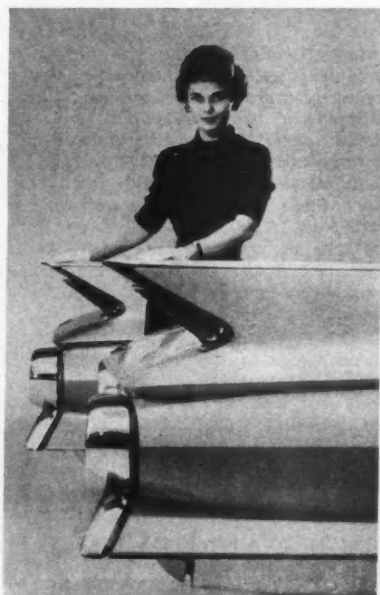
**CADILLAC'S TOWN SEDAN CUTS OFF SEVEN INCHES**



*Cadillac's latest offspring, the Town Sedan, has all of the features of the rest of the '61 line but seven inches have been trimmed from the overall length. The car is identical to the larger Sedan de Ville in all interior dimensions; it*

*loses the inches purely in the trunk area (see comparative photo at right). Price of the 215-inch Town Sedan is the same as that of the 222-inch Sedan de Ville, \$5498. It is in production and listed among the regular de Ville series.*

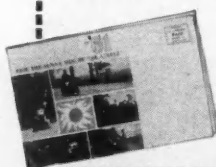
Oldsmobile has made a bid in the super luxury field with the announcement of the new Starfire sports convertible. This latest series attains distinction from the rest of the Olds line through a plush interior, bucket seats and an ultra-high-compression engine. The leather seats are separated by a high console which houses a tachometer and a stick control for the Hydramatic transmission. The 394-cubic-inch engine is equipped with a four-barrel carburetor and high-performance camshaft. Rear axle ratio is 3.42-to-1 and dual exhausts are standard equipment.



## RIDE A '61 HARLEY-DAVIDSON DUO-GLIDE

Hitch your wagon to a new Duo-Glide and get that wheeling feeling. Like riding a cloud — the way its deep-chested OHV engine flattens out hills . . . digs out for passing . . . smooths out the straightaway. Three-point suspension takes the spring out of rough roads . . . even cushions the smoothest roads.

Put yourself on your personal "cloud" at your Harley-Davidson dealer. New *Astro-Flite*-styled Duo-Glides come in standard FL and super-powered FLH models. Or mail coupon for this colorful folder.



### HARLEY-DAVIDSON MOTOR CO.

Dept. MT, Milwaukee 1, Wisconsin

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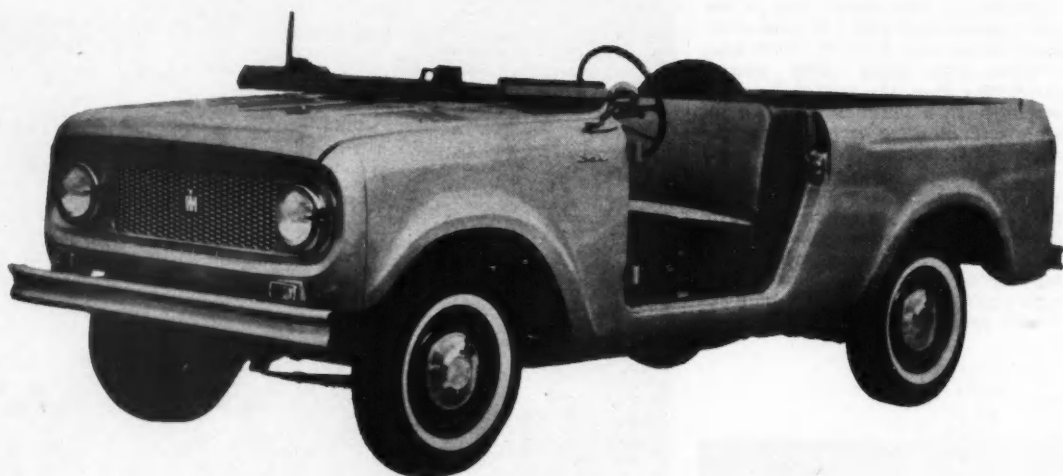
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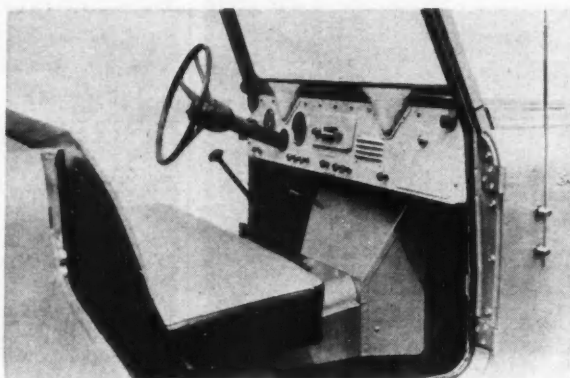
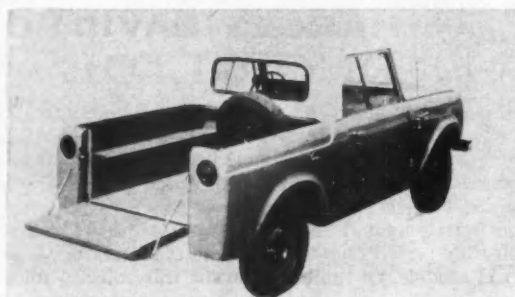




## Motor Trends in Pictures



**INTERNATIONAL HARVESTER  
UNVEILS ITS NEW SCOUT**



International Harvester branches into new fields with the announcement of a small all-purpose vehicle, the Scout. Offered in two-wheel or four-wheel drive models, the Scout seats three, has a removable steel top, five-foot pickup bed, fold-down windshield, removable door glass and doors. A full-length one-piece Travel-Top, that encloses both driver compartment and body is optional. Power is from a 152-cubic-inch, four-cylinder, valve-in-head 90-hp engine.

The Chrysler Corporation's most expensive and luxurious automobile, the Imperial Le Baron, bows in this year with the smallest rear window of any standard-size U. S. production car. This is the main distinction of the deluxe vehicle which carries a price sticker of \$6426.

**SUPER LUXURY IN  
IMPERIAL LE BARON**

**DODGE**

# LANCER

## **THE MUSIC COMES OUT MIGHTY SWEET!**

There's no whip, wooliness or waste motion in Lancer's manual transmission linkage. Every shift is short, crisp. An invitation to the gearbox virtuoso. Lay a hand on Lancer's seat-high stick. You'll feel like playing tunes again. And with Lancer's eager free-revving Charger 225 engine\*, the music comes out mighty sweet. Or: lay a finger to Lancer's new pushbutton three-speed automatic transmission\*. Entirely new in detail design, Lancer's lightweight automatic gives you smooth, quiet shifts. Excellent breakaway performance. Efficient operation, too. Enough of this—see your Dodge dealer. He has more good things to show you about Lancer.

\*optional at modest cost



**LOOK WHAT DODGE HAS DONE FOR LOW PRICE COMPACTS — LANCER**



1961

BY DON WERNER *The Editor of MOTOR TREND*



## CAR OF THE YEAR

The Pontiac Tempest is the MOTOR TREND Car Of The Year for 1961 and as such has been granted the annual MOTOR TREND Award.

The decision was reached by the editors of MOTOR TREND after long and careful study of the entire field of American motor cars. In a year of outstanding cars, it is clear that the Tempest is the car most outstanding for progress in design.

The basic premise of the MOTOR TREND Award is that the progress in

*continued on page 24*



Motor Trend Award



**PONTIAC  
TEMPEST**



## CAR OF THE YEAR

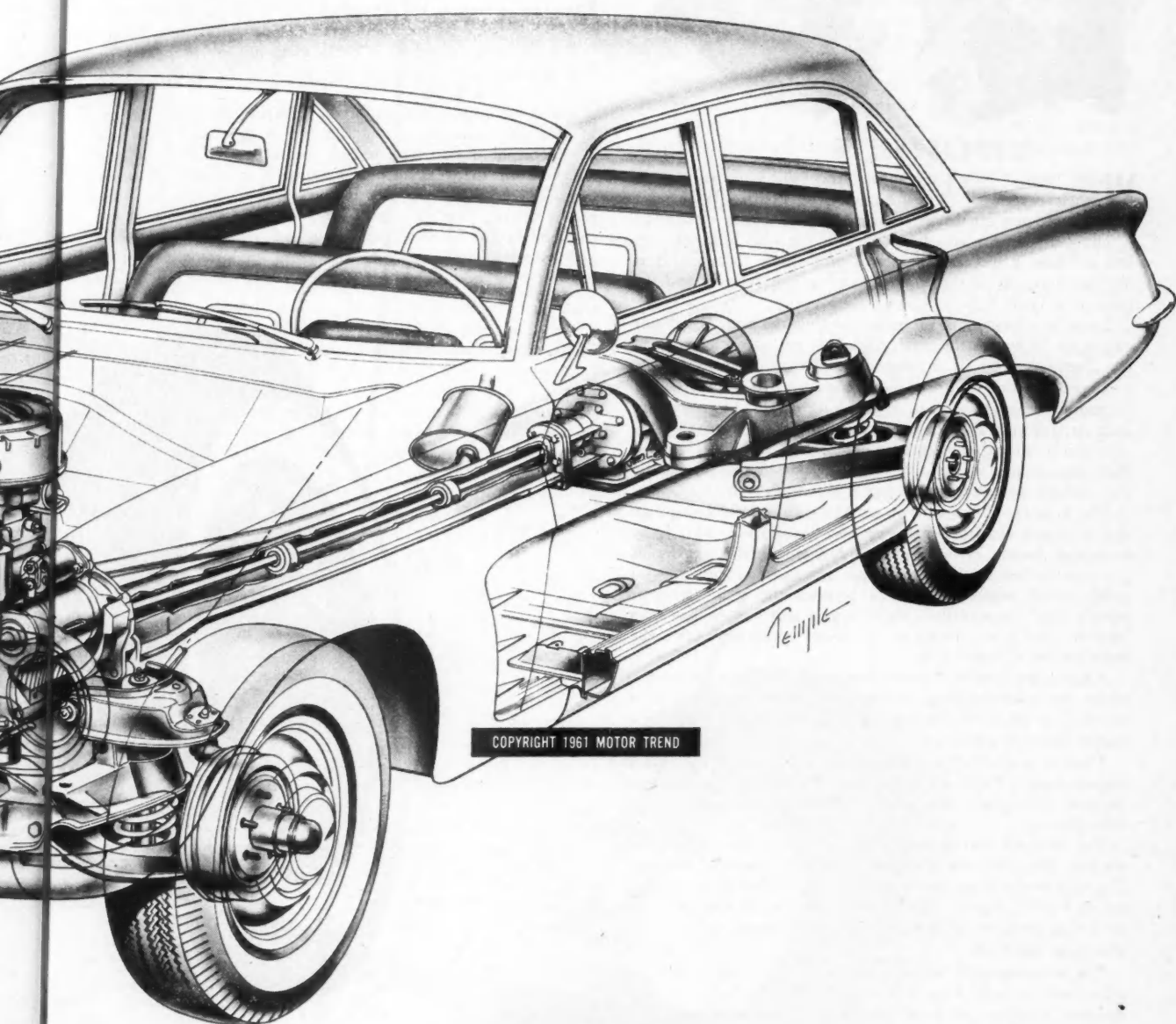


design recognized must be a distinct advance toward a better car. The Tempest fills this requirement fully.

Only once each year is one car selected for such special merit by MOTOR TREND. In 1961 there are many cars, many of them all-new, that represent worthwhile and welcome progress in design.

Yet the Tempest surpasses them all — not only by the total number of its design achievements, but also for what they are.

There are three major areas of design progress in the 1961 Tempest that make it one of the most advanced cars to be developed in America in more than two decades.



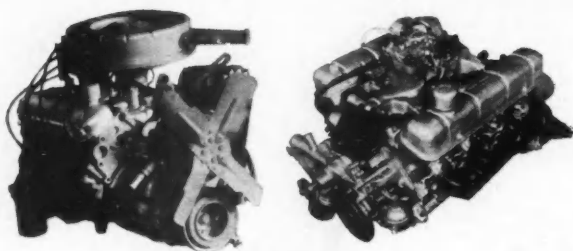
One of these is the transfer of the transmission to the rear axle, an improvement long predicted and hoped for in domestic front-engined cars.

Another is the introduction of the flexible driveshaft — an amazing example of practical engineering and completely without precedent.

And then there is engine power in a new form, again long awaited and long predicted, that will yield many practical benefits to the car buyer.

All of the foregoing design progress is in a car of functional size and adequate passenger capacity.

The new Pontiac Tempest sets many new trends and unquestionably is a prototype of the American car for the Sixties.



## ENGINES

**W**HEN TOTALLY NEW CARS appear, they will have as part of their design an all-new engine. The Pontiac Tempest is the very rare new car that offers not one new engine — but two!

The two engines are distinctly different and definitely are not, as often is the case, variations of a single theme. This is obvious since one of the engines is a big four-cylinder and the other is a small V-8.

From the viewpoint of progress in design, the more significant engine of the two is the small V-8. It is not an exclusive with the Tempest, since it is shared with two other GM cars.

The outstanding feature of the V-8 itself is that it is aluminum — another realization of an engineering dream. In its present form it displaces 215 cubic inches and is rated at 155 hp, although it is capable of turning out at least 100 more hp than that. This engine is the first of a new breed that eventually will replace the conventional cast-iron heavyweights.

The Tempest V-8 weighs about 330 lbs., approximately half of the largest cast-iron engine of the same layout. This is an immediate benefit in the Tempest. Along with the transfer of the transmission to the rear axle, it sets up the Tempest with nearly equal weight distribution between the front and rear wheels. And the so-called 50-50 weight distribution has long been an ideal in car design since it bears importantly upon the vehicle's overall roadability.

A secondary benefit of an aluminum engine is that ultimately, when the manufacturing process has been perfected, it is expected to result in cheaper cost. And this undoubtedly is a highly desirable prospect.

There is nothing of a radical nature about the layout of the engine design. There are a number of detail refinements that improve operating characteristics. But they are just that — refinements.

The Tempest four-cylinder engine is essentially one bank of the big 389-cubic-inch V-8 that powers the standard Pontiacs. The split results in an engine of 195 cubic inches with cylinders inclined at 45 degrees. While this engine is not notable as design progress, it nonetheless is exceptional engineering ingenuity.

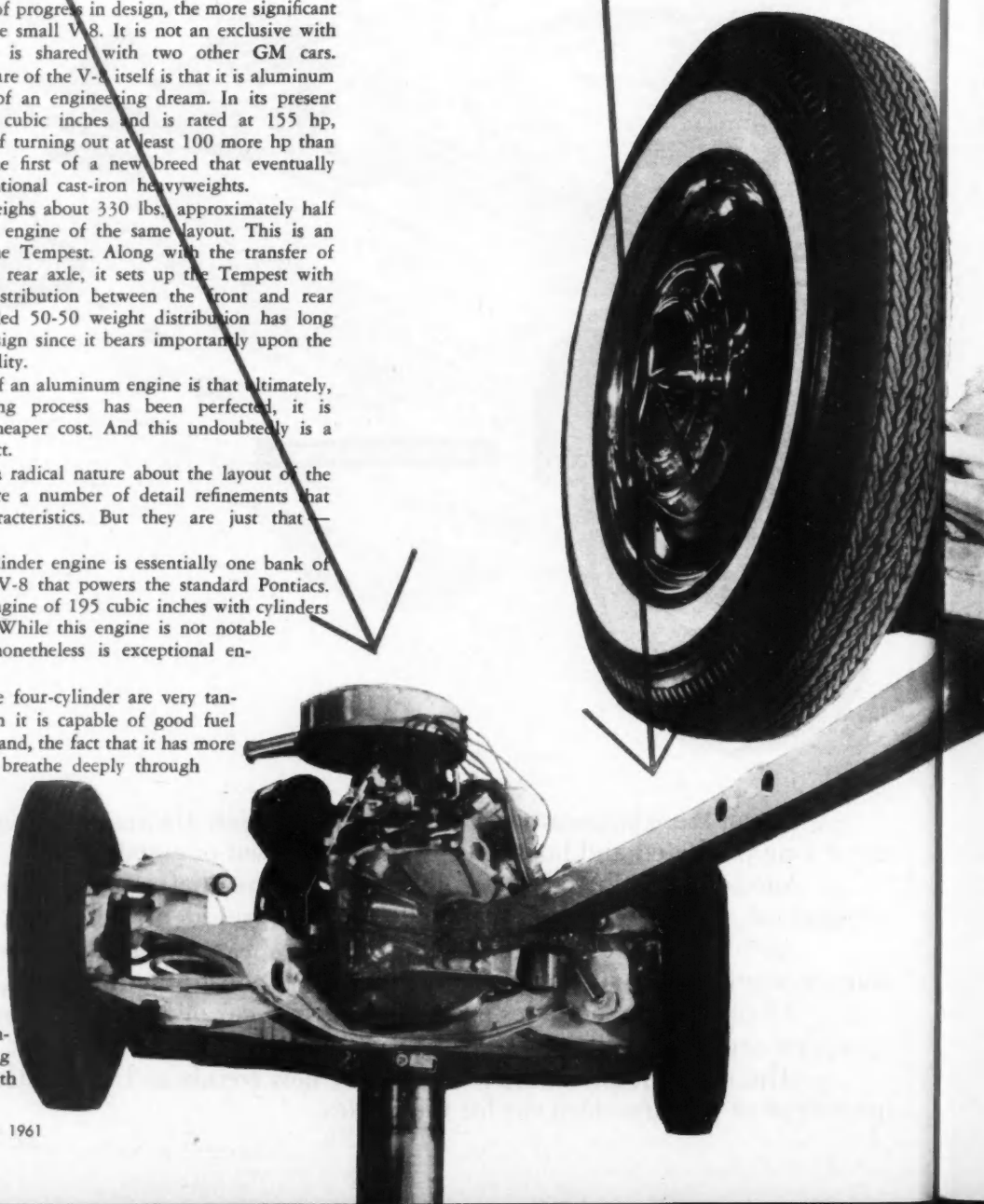
The advantages of the four-cylinder are very tangible ones. In mild form it is capable of good fuel economy. On the other hand, the fact that it has more cubic inches and can breathe deeply through large valves and ports, plus the high rpm potential, promises great performance when set up for it. The four having been derived from the veteran V-8 has, in that sense, been long in production and now is thoroughly dependable with abundant experienced service. Pontiac has set an interesting and valuable precedent with the four-cylinder.

## DRIVESHAFT

**T**HE MOST AMAZING single component in the engineering of the Tempest design is the driveshaft. It is radical and revolutionary and completely without precedent in automotive design.

Yet this new driveshaft is not a mere novelty or a trick — it is practical and functional and likely to be widely copied by other makes of cars.

There are several benefits of the Tempest driveshaft design. Most often mentioned is the fact that it permits a reduction in the height of the long tunnel that generally intrudes into the floor of the passenger compartment in nearly all other front-engined rear-drive cars. It also, however, eliminates completely the need for universal joints, and gone with them is the cost and bother of their lubrication and repair and the noise and vibration they created. The third important benefit is indirect: the new driveshaft enables softer mounting of the





engine, and in effect, further isolates its vibration from the rest of the car.

All this is accomplished in a relatively simple way, with the apparent simplicity that so frequently is characteristic of new and successful inventions.

The Tempest driveshaft is often described as flexible and compared to a speedometer cable, which transmits rotary action around bends, for the purpose of easy explanation. The similarity, however, is rather remote. Actually, the shaft is a long torsion bar that can be slightly bent or bowed into an arc as it extends from the front engine to the rear transmission.

In the case of the Tempest application of the principle, the shaft is bent or bowed about two inches along its entire length — which is 87 inches with an automatic transmission and 82 inches with a manual transmission. If this shaft in its arc were lengthened until it formed a complete circle, the diameter of the resulting circle would be 73 feet.

Considering the force necessary to propel a car the size of the Tempest, the driveshaft seems at a glance to be rather slender. A cross-section of it is only five-eighths of an inch. The stress on it is relatively light, however, since the shaft is between the engine and transmission and transmits only engine power and not the multiplication of it as does a conventional driveshaft behind a transmission.

The final achievement of the bar-shaft drive is that it is mounted on bearings and lubricated inside a sealed case or tube that should require no attention for the life of the car.

## TRANSAXLE

**F**EW ADVANCES in car design have been so long predicted or so widely discussed as the development of a front-engined American car with a transaxle. Now the Pontiac Tempest has made the breakthrough — and others will follow if and when they can.

The demand or desire for the transaxle arrangement (that is the uncoupling of the transmission from its direct attachment to the engine and shifting its location to the rear where it is in combination with the differential) has been stimulated for two reasons:

First, on American cars in particular, the interior passenger space, especially in the front seat area, has been severely restricted by the big bulge through the firewall and the floor. It has, in effect, made the front seat comfortable for no more than two adults in virtually all cars.

Second, American cars have the larger percentage, usually about 55 per cent, of their total weight on the front wheels. Consequently, they have been heavy steerers and with roadability characteristics not as good as they could have been with better weight balance. In other words, more of the total weight should rest on the rear wheels.

Now, after years of speculation and rumors that usually associated the first transaxle with cars in the very highest price classes, it finally has emerged on the Tempest.

Transaxles, of course, are not uncommon — they are perfectly ordinary in front-drive front-engined cars and rear-engined cars. In the case of front-engined cars driving the rear wheels, however, they are rare, even in Europe and Asia where virtually every possible combination of power train components is employed in one make of car or another.

So the Tempest transaxle ranks as a major achievement in the progress of design. In addition to further resolving the

space problem in the passenger compartment and balancing the car better, it smooths out the ride, particularly over rough surfaces, and neutralizes the steering characteristics.



# THE

# TEMPEST'S 3 DESIGN ADVANCES

**T**RADITIONALLY Buick's luxury image has always been supplemented with better-than-average performance and superlative high-speed riding qualities. Unfortunately, these riding qualities meant some sacrifice in handling. MOTOR TREND's test of the 1961 models, however, revealed a marked improvement in Buick's handling while the ride is as good as, or perhaps a shade better than, it has always been.

The cars tested were a Le Sabre four-door sedan and an Invicta four-door hardtop. Each car had an automatic transmission, power steering and brakes, plus the factory-recommended rear axle ratios. The Le Sabre was representative of Buick's least expensive model (if the Special, which is an altogether different car, is excepted). Power accessories were at a minimum and the interior materials were standard for Buick. The Invicta, however, had nearly every power accessory and a more expensive interior.

The Le Sabre had this series' standard engine, a 364-cubic-inch V-8 that turns out 250 hp at 4400 rpm and 384 lbs.-ft. of torque at 2400 rpm. The Invicta's engine was also standard and is the biggest powerplant offered by Buick. This 401-cubic-inch V-8 produces 325 hp at 4400 rpm and 445 lbs.-ft. of torque at 2800 rpm.

During the acceleration tests one car finished well within the hot performance class. The Le Sabre recorded an 0-60-mph time of 10.6 seconds and was rated moderately hot. The Invicta with 8.8 seconds elapsed at the same mark is crowding closer to the top performers than it has in recent years. Both cars also showed a slight improvement over the acceleration figures obtained with similar models tested last year. This proved true not only in the standing-

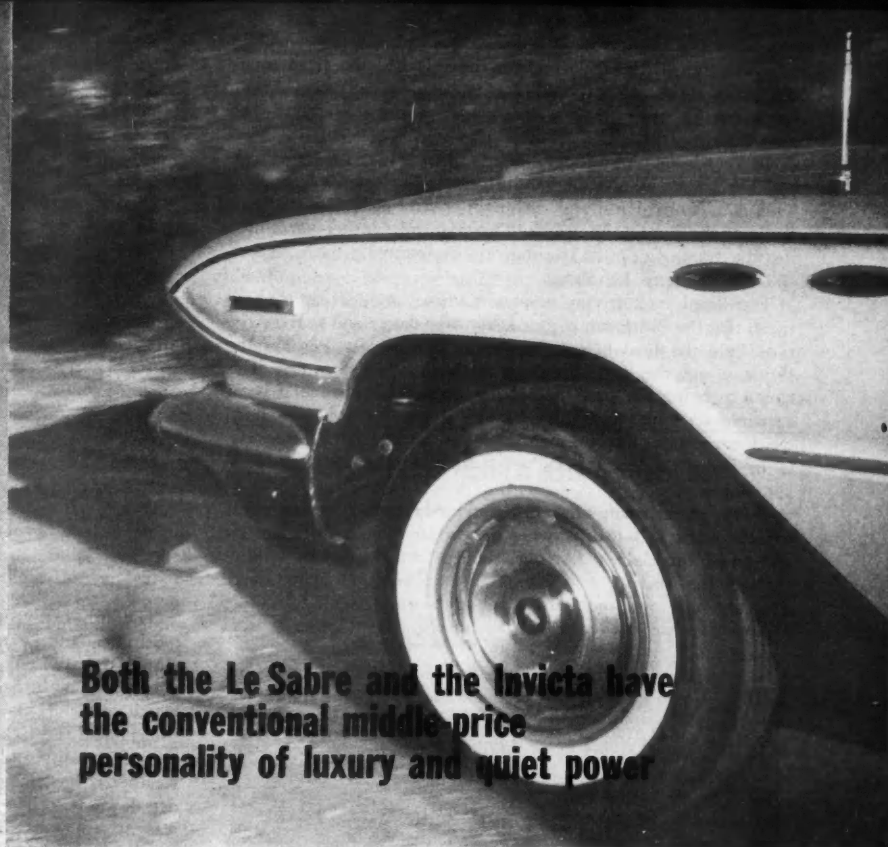


FULL RANGE ROAD TEST  
**BUICK**









**Both the Le Sabre and the Invicta have  
the conventional middle-price  
personality of luxury and quiet power**

start acceleration runs, but in the acceleration from traffic speed tests. In a direct comparison with other V-8-powered cars in their displacement and horsepower ratings, either Buick would be rated nearer the hottest car, although probably neither would take first place.

Although the performance figures are only slightly better this year, it is still only natural that the economy factor should be closely examined for a compensating drop in the mpg figure. But when the final computations were recorded, both test cars did reasonably well. The 12 to 16 mpg figure obtained with the Invicta is actually only a fraction lower than a similar model turned in last year. The Le Sabre, which falls into the general V-8 class, is also well within what is generally considered average limits for this class.

At high speeds either the Le Sabre or the Invicta was at its peak — in comfort, in stability and in ride. Granted this has been one of Buick's most admirable qualities, but those who are familiar with the car will probably notice a slight improvement even though the ride is still a trifle soft.

Those characteristics already discussed — economy, performance and high-speed ride — are almost equivalent to those found in the 1960 Buick. Since the 1961 model has an entirely new driveshaft and a completely redesigned rear suspension, it was expected that the car would behave differently. This proved true, and the area it was most evident was in the Buick's ability to corner.

The cornering (and other improvements in handling) are undoubtedly due to the new constant-velocity driveshaft, but perhaps even more to the changes it made necessary in the rear suspension. The driveshaft is now two pieces connected at the transmission and rear axle by conventional universal joints. In the center are two more universal joints placed back-to-back and aligned with a ball socket. This is a constant-velocity joint and divides the angles between the two driveshafts equally. This effectively cancels most ordinary vibrations which are produced by conventional driveshafts.

Since the new drive line is open, this made it necessary to redesign the rear suspension. Driving forces which were previously transferred from the rear wheels to the chassis through the torque tube are now being taken by a pair

*continued*

of lower control links. To prevent the axle housing from rotating about these control links during braking and acceleration, an adjustable third link is mounted between the frame and axle housing.

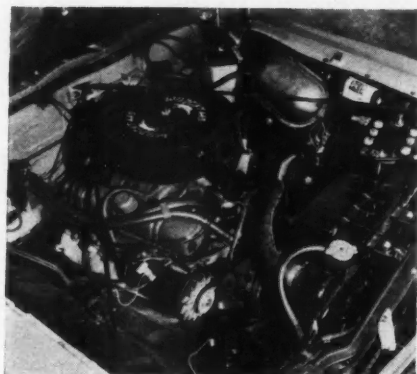
To keep a definite side-wise relationship between the rear axle and the frame, a track bar and crossmember assembly is used. This is a Panhard rod and, although shorter than last year's, is made of the same gauge stock. This rod and another bar which ties the frame side rails together are undoubtedly most responsible for the better handling.

Translated into driving responses, these engineering changes mean that the Buick can corner faster, stay flatter and at the same time hold the road better than it has in the past. Perhaps the Buick is not the best cornering machine in its class but it is closer to being the best than it has been. This change is most apparent on long-radius curves taken at faster speeds; on short, quick corners the improvement is not as marked. This, of course, is in keeping with Buick's reputation as a good high-speed automobile.

Buick, unlike many other GM cars, reduces the steering effort to four turns lock-to-lock when power steering is installed. At any speed, especially a fast one, there is a good feel of solidity through the steering wheel, plus an excellent feel of the road. This not only promotes safety, but gives the driver an accurate indication of what is going on beneath the car, whether he sees it first or not.

The quicker steering plus smaller dimensions, five inches shorter and two inches narrower, make the Buick more maneuverable at parking speeds. Moreover, the styling lets the driver see more of the road closer to the front of the car, making any driving easier. True, Buick in no way compares with a compact (like the Special, for instance), but it is somewhat better than average for standard-size cars.

Buick carries over from last year one of the best sets of brakes found on any domestic car. These are 12-inch drums all around, with the front ones cast-iron-lined aluminum; the rear, finned cast iron. It doesn't take a degree in engineering to realize that with wheel size pegged at 14 or 15 inches, brakes can't get much bigger. Buick has solved this with a set of brakes that will do an extended job and then dissipate the heat quickly, so that the brakes return to full capacity in short order. This year there has been a reduction in the physical width of the brake shoes, while at the same time effectiveness is slightly improved—a slick trick. This was done by eliminating the center groove which allows the full width of the lining to be in contact with the brake drum surface.



*Engine compartment is little changed, and although cluttered, serviceability is about average for Buick's class.*

The only really significant difference the test revealed between the Invicta and Le Sabre (taking into consideration the Invicta's more powerful engine, naturally) was in the passenger compartment. The Le Sabre had a more or less conventional material, which was judged only average in quality and durability. The Invicta had a black leather material and was judged superior in both quality and durability—although the comfort in hot weather is questionable. The quality of workmanship and finish detail was excellent, and perhaps even more significant, there was no apparent difference in finish quality between the two Buicks. This is not always true, even in the most expensive domestic cars.

The dash panel has caused a lot of comment and much speculation. Actually it retains a lot of the 1960 version with the thermometer-type speedometer and reflecting mirror arrangement. But most interest has been focused on the center section. This is what Buick calls the smoking set and consists of the

*Le Sabre proved to be a moderately hot performer, with comparatively good fuel economy. Most notable difference between test cars, however, was in another area.*



radio and three switches (rear speaker, antenna and courtesy light) in the top half. Below these units are the cigarette lighter and ash tray and the entire unit resembles the start of a console. Many persons are guessing that future Buicks may eliminate the center seat area, at least in front, and install a console over the transmission hump. Buick's optional bucket seats with armrest-glove compartment is another step in this direction.

The ignition switch is new and has five positions: Accessory, Lock, Off, On and Start. When the switch is in the lock position the ignition terminal is grounded. This eliminates the possibility of someone starting the car with a jumper between the battery and ignition coil.

There is one engineering change that should be commented on. This is the new X-frame that Buick adopted this year. This is a true X-type frame and eliminates side rails in the center. This concentrates strength where it is needed and makes it possible to reduce height without sacrificing passenger space. At the rear the rails were spread to accommodate the deep trunk area. Another benefit from the new frame is that it weighs about 70 pounds less. Incidentally, overall, Buick has shed around 200 pounds this year, including the frame and about 20 pounds on the transmission.

There have been few changes made in the automatic transmission specifically for 1961. The Turbine Drive is now standard in all Buick series. Several minor developments were made during the 1960 model run and are being continued. Of the changes for this year the most significant is probably the weight reduction and the shortening of the transmission by six inches. The case and the rear bearing retainer are also smaller, permitting a reduction in the height of the transmission hump.

There are few engine options available to change the per-

formance figures of the Buick. The 364-cubic-inch V-8 is available, with a four-barrel carburetor upping the horsepower to 300. New this year is an economy version with two-barrel carburetion. This version has a 9-to-1 compression ratio and will operate on regular fuel. No regular production options are listed for the 401-cubic-inch V-8.

Technically speaking, the Buick rear axle ratio picture is equally as stark. Only the 3.07 and 3.23 gearsets are listed, with neither of these ordinarily being interchangeable. What is not generally known, however, is that Buick engineering has developed gearsets from below 3-to-1 up to nearly 5-to-1 (numerically speaking). It means going through the engineering department at the factory, though, with an added expense and a long waiting period.

/MT

## SEE TEST DATA ON PAGE 52

*Interior of Invicta, upper right, was finished with a black Naugahyde material that rated high with few exceptions. Instrument cluster, lower right, is largely a holdover from last year. Angled mirror lets driver pick best angle for instrument reading, but legibility is reduced by thermometer-type speedometer. Changes in handling and ride noticed during the test are partly due to the forward strut, lower left, which helps stabilize the front suspension.*





FULL RANGE ROAD TEST



**TESTS OF THE NEWPORT AND NEW YORKER  
REVEAL A NEW NOTE OF ECONOMY FOR '61**



# CHRYSLER

**C**HRYSLER HAS A BROADER RANGE of engine selections this year, and MOTOR TREND'S two test cars were equipped with the biggest and the smallest versions. The test results, however, showed no surprising comparisons between the cars. The most notable difference, in fact, was in the degree of luxury of the interiors.

One of the Chryslers tested was the Newport, the line's "economy" model, which is powered with a 361-cubic-inch V-8 that has a 9-to-1 compression ratio and operates on regular fuel. Using a two-throat carburetor, this engine turns out 265 hp at 4400 rpm and 380 lbs.-ft. of torque at 2400 rpm. In keeping with Chrysler's fuel economy theme, it had only a minimum of power accessories.

The other test car, a New Yorker, was well supplied with accessories and powered with the line's most potent engine. This 413-cubic-inch V-8 with a 10-to-1 compression ratio and a four-barrel carburetor produces 350 hp at 4600 rpm and 470 lbs.-ft. of torque at 2800 rpm.

Since both cars had Chrysler's three-speed automatic transmission and the factory-recommended rear axle ratio of 2.93-to-1, the only apparent factors which could affect the performance figures were weight and engine size. How much power it takes to overcome the 325-pound weight difference is plainly revealed by the 0-60-mph acceleration test.

Although the Newport is rated 85 hp less than the New Yorker, the economy Chrysler was quicker than the bigger car by two-tenths of a second. But its acceleration curve leveled off at the 45-mph mark and held steady to 60 mph. In a longer run the New Yorker, with its extra power, once the inertia of greater weight is overcome, would have to be given the edge. For practical purposes, however, the two cars are equal in standing-start acceleration.

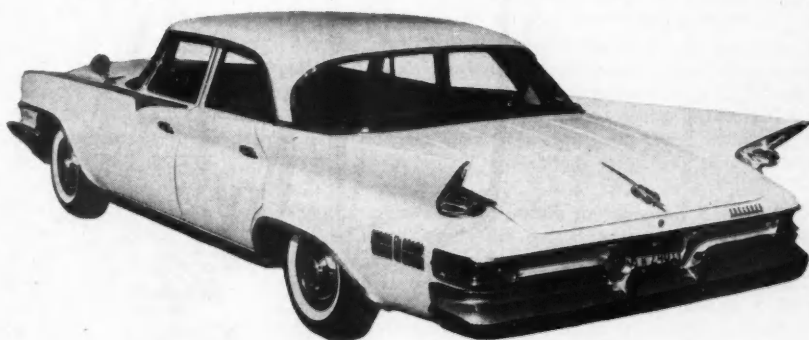
Ranking the two test Chryslers overall against their contemporary designs in the medium-priced luxury field, they would be well above average, but slightly less than the hottest. However, in rating the Newport and New Yorker for their mid-range acceleration ability (kickdown shifts for passing power usually made in an average range of 20-50 mph), either car would be among the best in the class. Response to a kickdown is fast, and the speed increases rapidly, giving the driver more passing potential than he needs for average situations and the essential extra surge for emergency situations.

In this area Chrysler scores high largely because of its Torqueflite transmission. This conventional three-speed automatic with torque converter is one of the best designs of its kind out of Detroit today. Its durability and responsiveness have been proven adequately through the years.

One of the big question marks with Chrysler this year was,

how well would the Newport do in economy? MOTOR TREND'S test car, which was one of the first off the production line, seems to be an accurate indication of the answer. The final range of 12 to 16 mpg is a little above average for the medium-priced, standard-sized-car division. In practical terms this is about two or three miles per gallon better than a New Yorker will get. In cost of operation, this really boils down to one thing — how many miles per year does a driver put on the car? If it approaches 50,000 miles a year, the difference is going to be considerable — remember that premium fuel costs more per gallon. On the other hand, if the driver does little long distance driving, it will really not matter at all.

Handling and ride are two characteristics that can be justifiably spoken of in the same breath, since both depend in large upon the way the suspension is balanced for the weight of the car and the external and internal forces that are put upon it in any type of a maneuver. Ride, of course, is one of the most desirable characteristics in any medium-priced luxury car. Chrysler scores



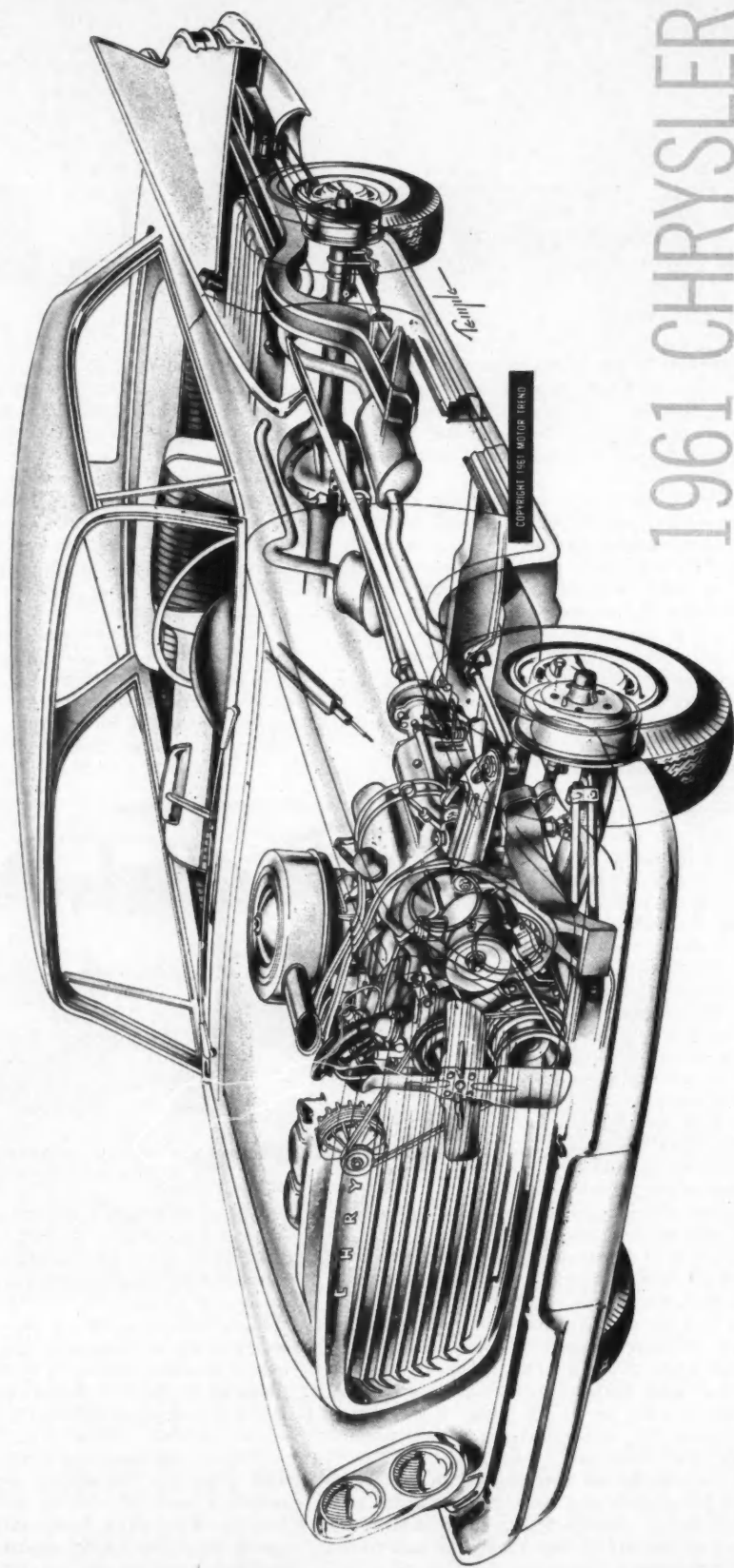
THE NEW YORKER OBTAINS DISTINCTION THROUGH USE OF ORNATE DETAILING, INSIDE AND OUT

high with its ride, but the line differs slightly in this respect from the proponents of the soft ride theory.

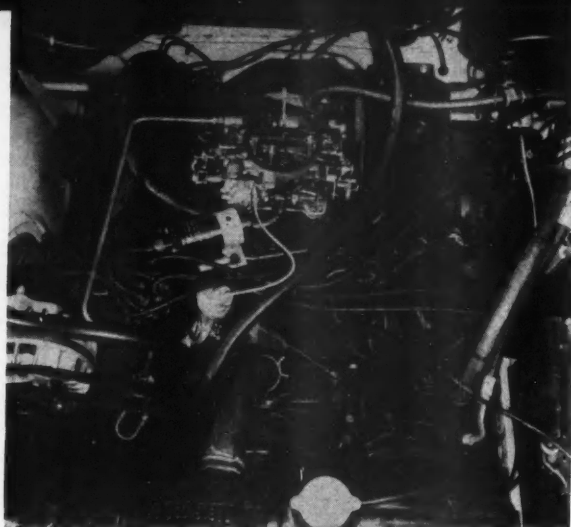
This might be a little hard to understand unless a few basic facts about the line's suspension are first taken into consideration. In the rear Chrysler has a Hotchkiss drive with semi-elliptical springs. This, of course, is one of the better rear suspension arrangements to resist sideways body motion. Since the rear axle is balanced forward on these leaf springs, torsional forces produced by the axle during hard acceleration are practically eliminated. In front the wheels are suspended with a torsion bar spring — exclusive with Chrysler in the medium-priced field.

Chrysler engineers seem to favor the theory of a firmer ride. The rebound is fast, and this causes considerable slap on the pavement when the tires are going over continuous bumps — like tar divider strips. Unfortunately, when a driver hears this sound, he psychologically associates it with a harsher ride. This is definitely not the case and outside of sound, Chrysler has an excellent ride. Small bumps are absorbed by the suspension and

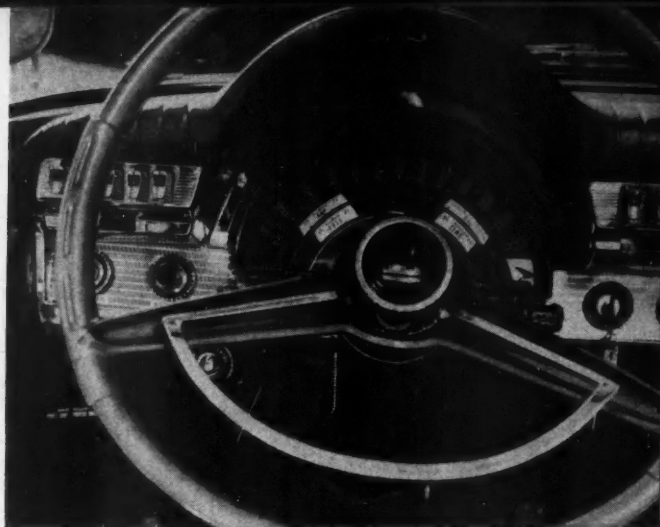
motor trend



1961 CHRYSLER



*Both test cars were powered by proven Chrysler V-8's, but Newport had new economy feature of a regular gas diet, due to lowered compression ratio.*



*This instrument cluster is the most spectacular design in the medium-price class. At night it truly glows with electroluminescent lighting.*

are usually unnoticed by the driver. Bigger bumps, like shallow gullies, can be crossed at highway speeds with no tendency for the front end to pitch in an undulating motion. This is only a natural result of the firmer ride theory. Another important advantage is good stability and superior road-holding characteristics at any speed.

Cornering also benefits from the firmer suspension and corners can be taken faster than they can in most cars with similar wheelbase and weight. Handling has always been one of Chrysler's most admirable qualities, and the 1961 models are again at the top of the medium-priced field. However, this year, many competing makes have made some important changes in their suspensions and the difference between a Chrysler and the next best-handling car is less than it has been in years.

In the matter of physical dimensions, Chrysler is one of the least changed lines, and the 1961 measurements are within a fraction of an inch of 1960. The only significant different dimension between the Newport and New Yorker was the four extra inches in the wheelbase and overall length of the New Yorker. But in interior dimensions this extra length does not change any passenger comfort dimension except legroom, and this by only two-tenths of an inch.

Inside, the biggest difference between the two test cars was in the selection of material. The economy car had more or less conventional materials, which were judged average for the medium-priced luxury class. The New Yorker was finished in a luxurious fabric, which rated well above average for elegance.

Chrysler's dash panel is largely a holdover from last year, with a massive, somewhat cluttered look. Transmission controls are pushbuttons mounted on the left. Fresh air and heater are matching buttons mounted on the right. Although Chrysler's heater is more than adequate, the fresh air ducts are a little less than what might be expected on a car in Chrysler's class. The volume of air ducted to the passenger compartment does not seem to be sufficient for good ventilation on warm, wet days, when the windows cannot be rolled down.

The instrument cluster is a paradox, with some features that will rank with the best of all Detroit cars, and others that are not up to average. The speedometer probably is one of the best ever seen on a conventional car. It is big, shaped in a semi-circle and easily visible to the driver. Numerals are big and speed is marked in one-mile-per-second increments that are widely enough separated to be read at a glance. Along with this the instrument cluster has gauges for gas, temperature, oil and generator.

At night electroluminescent light, which eliminates both light bulbs and shadows by actually running an electrical charge through the numerals, makes them extremely legible and pleasing. Unfortunately, the overall design does not contribute to general legibility of the instrument cluster. Unlike most clusters, which are usually on a flat plane, Chrysler's is staggered vertically and longitudinally away from the driver. This means that all the instruments cannot be taken in at a glance. If the driver wants to see how fast he is going and how much gas he has left, he must move his eyes and change focus. Of course, this takes only a second, but it can be inconvenient at high speed.

Like its size, Chrysler changed few engineering designs this year. One rather important development was the alternator, which generates an AC current, then converts it to DC. Since the alternator will deliver a current at idling speeds, which the old generator wouldn't, it makes good sense on a car like Chrysler, which usually has several electrically powered accessories.

Options, other than accessories, are somewhat limited. One of the most significant is the new three-speed shift, which was introduced this year. Incidentally, this is a floor-mounted shift and does away with the pushbuttons used for the automatic. This manual has helical gears but more important, they are wider and will stand up longer under a heavier load.

Standard in both the Newport and Windsor, this shift should give better mileage, even though its axle ratio is increased (numerically) to 3.23. The axle option picture is also limited, but the 3.23 of the manual is listed as a regular production option for any Chrysler. With this rear axle gearset either a Newport or a New Yorker should move over into the hot class of cars, although the overall mileage is sure to drop slightly.

No engine options are listed for either the Newport or the New Yorker. However, the Windsor, Chrysler's middle line, has a separate powerplant that falls almost halfway between Chrysler's two other engines. This is a 383-cubic-inch V-8 with a two-barrel carburetor and a 10-to-1 compression ratio. It turns out 305 hp at 4800 rpm and 395 lbs.-ft. of torque at 3000 rpm. If transmission and axle ratio are equivalent, it is doubtful if any significant change would be made in either the performance or economy by selecting the Windsor's power team. /MT

**SEE TEST DATA ON PAGE 52**

## FULL RANGE ROAD TEST

# DODGE



**T**HE DODGE POLARA is one of the most roadable cars in its class. Underneath restyled sheet metal are the familiar power options and suspension that have won Dodge its reputation as a first-class highway machine.

Fortunately, the basic engineering features have been

continued into the new season without change, though there are a number of significant minor refinements. Notable among these are an alternator in place of the usual DC generator, a new manual transmission and a self-adjusting drive system for the power steering.

Now Dodge's only medium-priced series, the Polara, costs slightly less in '61 form and replaces both the Matador and Polara offered last year. Apparently because of the Dart's success, the company is devoting most of its attention to the popular field.

Actually, both Dodge lines look very much alike. The Polara has a few distinctions in its grille, side trim and, particularly, in its unusual jet-like taillights. In addition, it is longer than the Dart, four inches in wheelbase and three in overall length, though its added size is put to practical use only in the trunk. Passenger compartment dimensions are the same so, beyond its more luxurious upholstery and appointments, the senior series offers no increase in comfort.

Two-door convertible and four-door hardtop body types, equipped with 265- and 325-hp engines respectively, served MOTOR TREND's test requirements. Other styles available include a two-door hardtop and four-door sedan, while the choice in powerplants is rounded out with a 330-hp ram job.

The three Dodge V-8's are similar to the biggest engines offered for the Plymouth and Dart and the smallest used in the Chrysler. Standard is a 361-cubic-inch unit with a two-barrel carburetor and 9-to-1 compression ratio. Its 265 hp occurs at 4400 rpm, while 380 lbs.-ft. of torque are produced at 2400 rpm.

As tested in the convertible, the 265-hp powerplant was geared through Torqueflite, a three-speed automatic transmission, and a 2.93 rear axle. Considering this was Dodge's most modest power train in the heaviest passenger body, the performance figures were quite impressive. The 0-30, 0-45 and 0-60 times were, in order, 3.8, 6.3 and 10.1 seconds. Fuel consumption was on a par with other cars in the same class, 11 to 15 mpg.

*continued on page 38*

PHOTOS BY AL PALACY







*Pleated vinyl upholstery added authentic luxury to both test cars. Higher seat back on driver's side was extremely comfortable during long periods of driving.*

## DODGE ROAD TEST *continued*

For a bit more pep with only a slight sacrifice in economy, Dodge also builds the 265-hp/Torqueflite combination with an optional 3.31 rear axle. In addition, the same engine can be had with a new three-speed manual transmission and 3.58 axle gearing.

The 361-cubic-inch V-8 is available in the Dart, though not in the Polara, with a four-barrel carburetor that enables it to develop 305 hp. Those interested in adapting better breathing to the standard Dodge would find that the parts fit with little effort.

Otherwise, it is necessary to jump a full 60 hp for a higher-performance option. This means the Polara D-500, which produces 325 hp at 4600 rpm and 425 lbs.-ft. of torque at 2800 rpm. Displacing 383 cubic inches, it has four-barrel carburetion and 10-to-1 compression. It is essentially the same in basic design as the 361-cubic-inch unit, except that it has a larger bore.

As fitted to MT's hardtop, the D-500 also drove through Torqueflite but had a 3.23 final gear. It took 3.6 seconds for 0-30, 5.7 for 0-45 and 8.9 for 0-60, excellent figures by any standard. Mileage dropped an expected notch to the 10-to-14 mpg range.

The D-500's only gearing option is the manual shift, again with a 3.58 axle.

At the top of the list is the mighty ram induction V-8, using the same 383-cubic-inch block with a 10-to-1 compression ratio but fed air-fuel mixture from *two* four-barrel carburetors through long, resonating intake manifolds. Horsepower is increased only slightly, becoming 330 at 4800 rpm, but torque jumps to a potent 460 lbs.-ft. at 2800 rpm.

For the ram-engined Polara, 2.93 is the normal axle ratio with the automatic transmission, while 3.23 is standard with the manual and optional with the automatic.

The striking characteristic of the ram is a sharp torque curve. It has plenty of punch in the middle-rpm range but is not as responsive at either end of the output spectrum. When it



*Plenty of luggage space was to be found in the Polara hardtop, though the convertible had 4.3 cubic feet less because of the provision for its collapsed top.*

hits, it hits hard, with a throbbing roar that announces its might to the world. On the open road, it provides enough sudden power for passing that a downshift is seldom necessary.

The D-500, on the other hand, has a flatter curve and performs more smoothly, quietly and consistently over a broader range of engine speeds. From a standing start, it has virtually the same acceleration to normal highway speeds but needs a drop in gear to pass another car quickly. Furthermore, it would be nosed out in a quarter-mile drag race by a ram-powered Polara with proper gearing.

In short, the 330-hp Dodge V-8 is an enthusiast's engine, capable of a terrific output at the expense of silence and overall flexibility, while the 325-hp unit provides very high performance with greater suitability for normal highway use. And, if it is not obvious, the ram is the thirstier of the two. It takes lots of fuel for the spurts of speed that are its forte.

All three engines are equipped with an alternator instead of the conventional direct-current generator. A higher electrical output, even at idling speeds, is the result.

Dodge's Torqueflite automatic transmission has a torque converter and three-speed gearbox with three, pushbutton-operated driving ranges. "First" provides first gear only, "Second" allows both first and second to function and "Drive" permits normal first-second-third operation, a set-up that makes manually-controlled upshifts and downshifts very easy.

While efficient with any Dodge engine, Torqueflite reacts sensitively to the amount of torque put through it. It was quite smooth with the 265-hp engine but shifted rather abruptly in the 325-hp installation.

This year's manual shift is all new and features "closed case" design. Instead of the bulky access panel at one side, it has an opening at the top that does not have to double as part of the case structure. Consequently, it is smaller and lighter than the unit it replaces, yet is specifically engineered for use with the high-powered Dodge V-8's.

For several years, all Chrysler cars have had outstanding stability at high speeds and the new Polara is no exception. Others in its price range may equal or better its performance against the clocks; none can surpass its handling.

The springing consists of torsion bars at the front and semi-elliptics at the rear. However, the secret of the car's stability is not so much the type of suspension as its relative firmness and carefully planned geometry. Add precise, quick power steering, 3.5 turns lock-to-lock, and the degree of control is remarkable for a vehicle of the Polara's size and weight.

On tight, fast turns, body sway is slight and the rear tires break loose smoothly and gradually enough that a competent driver has no trouble keeping them in their proper place. The break occurs in such a way that it aids cornering, rather than hampering it.

Stability on the straight is equally good. The Polara holds its course with a minimum of steering correction.

The power steering, incidentally, has a new feature that should minimize drive belt wear. With the engine running, the belt is tightened or loosened in proportion to the load on it. When power is turned off, tension is relaxed.

The stiff springs that contribute to Dodge's roadability also affect its riding qualities. Both of MT's test Polaras proved quite comfortable under most conditions, but at moderate speeds over rough surfaces, the very circumstance that shows most medium-priced cars at their best, there was a distinct vibration.

At highway speeds, though, the same stability that made the cars so effortless to drive put passengers at their ease.

Both test vehicles were finished inside with a luxurious, pleated vinyl. As in most of Chrysler's costlier cars, the driver's side of the front seat had a higher back for firmer support on long trips.

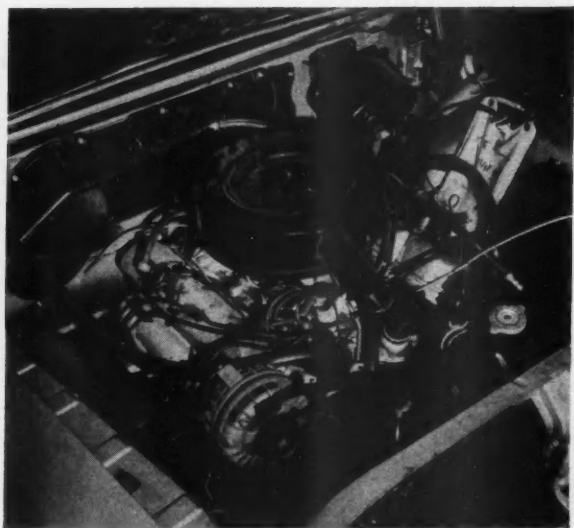
The dash layout is little changed from last year. A legible speedometer is mounted above the dash proper, where the driver can see it with the least possible movement of his eyes from the road. The secondary instruments, however, are set low and are hard to read at a quick glance. Only one warning light, showing defective oil pressure, is included; the ammeter has reappeared, apparently to convince '61 Dodge owners of the new alternator's efficiency.

At the center of the dash is an exceptionally good map light. It is low enough that it does not distract the driver too much, bright enough that a passenger can read clearly, and can be operated independently of other interior lights.

A functional difference between the convertible and hardtop bodies was found in their trunks. To provide room for the convertible's folded top, its deck lid springs project back into the cargo area, instead of forward like the sedan's. Scuffing of luggage is prevented by large cardboard shields around the springs but these shields, in turn, are easily damaged. Most important, the arrangement costs the convertible 4.3 cubic feet of useful capacity. And the spare tire, carried on the floor at the left side of the compartment, takes up much of the remaining space.

One last comment has been reserved for an accessory fitted to MT's Polara hardtop. Special front and rear bumper guards had rubber inserts to prevent dents and scratches. Parallel parking in tight quarters, pushing another car to start it or any of the everyday situations that can result in bumper damage were matters of minor concern with this Dodge. Here is one more evidence that Detroit designers have begun to understand just how their creations are actually used.

/MT



*Polara V-8 engines are based on Chrysler Corporation's 361- and 383-cubic-inch blocks, are rated at 265, 325 and 330 hp. Alternator is new feature this year.*

**SEE TEST DATA ON PAGE 52**



FULL RANGE ROAD TEST



**THERE'S A DISTINCT NEW  
CHARACTER TO THE SLIMMED-DOWN  
MONTEREY—FORD'S ONLY CONTENDER  
IN THE MIDDLE-PRICE FIELD**



# MERCURY

**T**HE ALL-NEW MONTEREY is Mercury's only entry in the medium-priced field this year. With the introduction of the Meteor 600 and Meteor 800, the make has followed Dodge into competition at the lower end of the big car market and left only one series in its traditional class.

MOTOR TREND tried a pair of four-door Montereys and found them completely changed from the '60 model. Mercury has dropped its own engines, chassis and body shells to borrow all major components from Ford. As a result, it is a smaller car than it was last year. Its 120-inch wheelbase is six inches shorter and 214.6-inch length 4.6 inches less.

And it shares several of Ford's innovations for '61, notably a 30,000-mile lubrication interval. Yet it would hardly be fair to dismiss the car as a lower-priced make in disguise. It adds special touches of its own to the basic design and demands separate consideration.

Most important of Mercury's exclusive features is a new suspension system. At a quick glance, there seems to be nothing unusual under the car. Normal coil springs with unequal control arms are evident at the front and semi-elliptics at the rear. But look closer. In front, the forward mounts of the two lower arms are shackles instead of just the usual bushings. And in back, *both* ends of the spring assemblies are attached to the frame with shackles.

As a result, the wheels are allowed to move to the rear, as well as up, when they strike an obstacle in the road. Though the actual amount of recession is slight, five-eighths of an inch maximum for the front wheels and three-eighths for the rear, it permits them to react more flexibly and absorb shocks more smoothly.

Cadillac, Lincoln and Thunderbird all use a similar principle this year but with a completely redesigned front suspension. Mercury has simply adapted existing components.

In the Monterey test cars, the system showed to its best advantage when wheels on both sides were forced to recede at the same time. Tar strips across concrete pavement are a good case in point. The pronounced "thump" they usually cause was almost totally absent. The driver would have to pay close attention to feel or hear any reaction at all.

Abrupt changes in road surface were also taken in smooth stride. A passenger might see the asphalt turning to rough dirt ahead, brace himself for a shock as he saw that the driver was not going to reduce speed, then look shocked himself as the car sped onto the dirt with no sudden jarring.

Provided the car was not travelling *too* fast, the irregular surface was absorbed smoothly and silently with a minimum of bouncing around. That mention of silence is important; the rearward wheel movement cancels noise from the road as much as shock.

In evaluating the Mercury's riding qualities, it must be remembered that the basic design of the car was borrowed from a lower-priced make and lacks the size and weight of some others in its class. Yet, the ride is well above the average for the low-priced field and compares very favorably with any of the Monterey's immediate competitors. The extra shackles do their job well.

One of the pleasantest surprises was that the extra wheel movement did not have an adverse effect on handling. The two test cars had virtually the same feeling of control as the current Ford, which has similar basic suspension without the recession feature.

*continued*

PHOTOS BY PAT BROLIER

A major reason is that the wheel action is controlled; the movement is strictly fore-and-aft and will not take place unless sufficient force is applied against the wheels. The front wheels, for example, maintain their proper tread and camber at all times.

The Mercury proved stable enough both in turns and on the straightaway, though it was difficult to place with complete accuracy. Body sway was within reasonable limits and rear traction broke gradually enough that a capable driver could correct in time. However, while the steering was fairly quick (3.9 turns lock-to-lock) and had a live feel, it did not respond with absolute precision.

Yet because of its smaller overall size, the new Monterey definitely out-handled its '60 counterpart. Tight turns were particularly easier to negotiate.

In engine choices, the two test cars represented the extremes for the Monterey. One was a four-door hardtop with the smallest of Mercury's three V-8's and the other a four-door sedan with the biggest. Both had three-speed automatic transmission and 3.00 axle ratios.

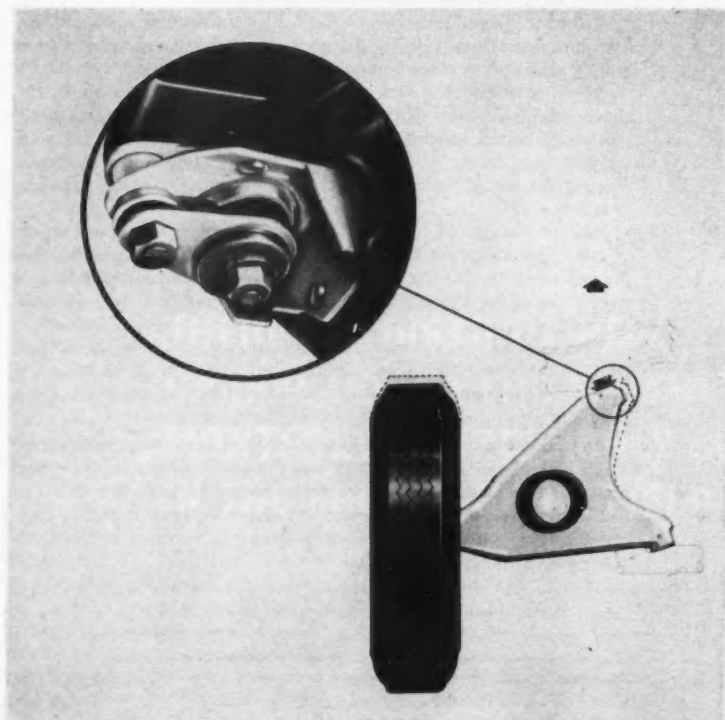
The standard powerplant, tested in the hardtop, develops 175 hp at 4200 rpm and 279 lbs.-ft. of torque at 2200 rpm. Displacing 292 cubic inches, it has a two-barrel carburetor and, for operation on regular fuel, an 8.8-to-1 compression ratio. Like last year's 205-hp 312, it is derived from the first ohv V-8 Mercury introduced in '54.

Fitted to the sedan was the 390-cubic-inch engine that produces 300 hp at 4600 rpm and 427 lbs.-ft. at 2800 rpm. Its carburetor is a four-barrel and compression ratio 9.6-to-1. New in both the Ford and Mercury this year, it is based on the same block as the final Monterey option, a 352-cubic-inch unit adapted from the lower-priced make. This last has 220 hp at 4400 rpm and 336 lbs.-ft. at 2400 rpm, using a two-barrel carburetor and 8.8-to-1 compression ratio.

Mercury offers three other powerplants, a 135-hp Six along with 330- and 375-hp versions of the 390 V-8. However, these are not regular options in the Monterey, only in the Meteor. The mighty 383 and 430 V-8's borrowed from Lincoln no longer appear in the line-up.

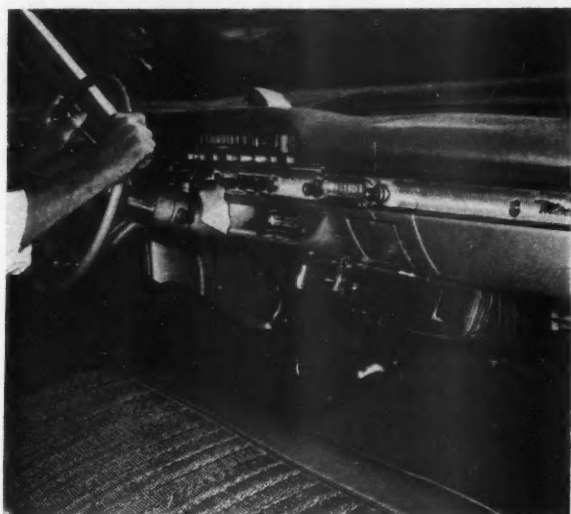


*The 1961 Mercury bears a much stronger resemblance to the parent Ford line than has been the case in previous years.*



*Mercury's wheels move fore and aft when bumps are encountered. In front this is accomplished by using shackles instead of bushings on the forward mounts of the lower arms. This feature was largely responsible for many of the changes in handling and ride.*





*Mercury's new, smaller external dimensions have not made any significant changes inside the passenger compartment and the space available is still generous.*

The 175-hp car emphasized modest behavior. It operated smoothly and quietly while delivering better-than-average fuel economy for a medium-priced vehicle. Under test, it ranged from 12 to 16 mpg, with the promise of as much as 18 mpg at steady highway speeds.

All this, of course, was at an expected sacrifice in performance. The acceleration figures, 0-30 in 5.4 seconds, 0-45 in 9.0 and 0-60 in 14.5, tell the tale of moderate passing and climbing ability.

Matters were reversed with the big 300-hp job. It scored between 10 and 14 mpg, about par for the price class, while recording 4.2 seconds for 0-30, 7.0 for 0-45 and 10.2 for 0-60. In addition, it was a somewhat noisier engine. Under full throttle, it made itself heard clearly, though this would probably be a source of satisfaction rather than annoyance for the performance enthusiast.

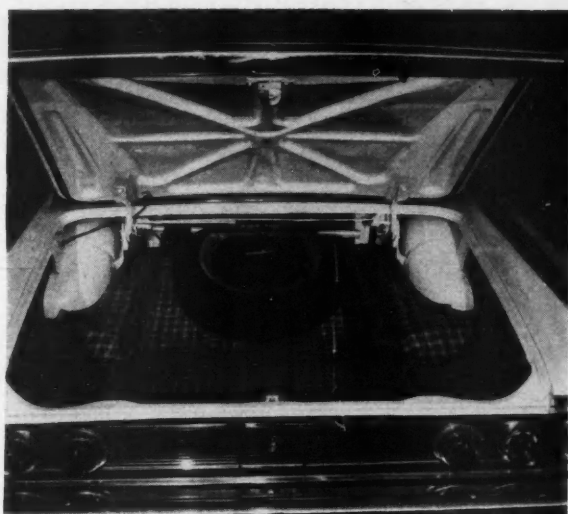
With the three powerplants, the Monterey covers a broad range of requirements. The 175-hp 292 allows a conservative driver to enjoy a comfortable, well-finished car without excessive fuel bills while the 300-hp 390 provides the kind of "go" one associates with medium-priced makes. Finally, there is the 220-hp 352 for those who want a compromise, more power than the economy engine but less thirst than the big one.

The same transmission, Multi-Drive Mercomatic, was fitted to both test cars. It follows the usual Borg-Warner pattern, a torque converter and three-speed gearbox, and is similar to Ford's Cruiseomatic.

Of its two drive ranges, "D-1" provides normal first-second-third gear operation while "D-2" functions in second and third only. Actually, experience with the cars showed no particular advantage to "D-2," except for second gear starts on slippery pavement. Acceleration was sacrificed and, because the engine had to work harder to move the car off the line, fuel was burned just as quickly.

There is also an "L" range to lock the unit in first gear or, if engaged above 25 mph, provide a controlled down-shift to second.

Multi-Drive is standard with the 390 engine but another automatic, just plain Mercomatic, is available with either the 292 or 352. Also Borg-Warner, it resembles Fordomatic and incorporates a torque converter and two-speed box. "D" allows both gears to operate and "L" holds first.



*Actual cubic capacity of Mercury's trunk is among the highest quoted for its class; however, layout has created a shallow cargo compartment and limits usefulness.*

The two smaller V-8's are also offered with the usual three-speed manual transmission though, in the Monterey, not with overdrive. This item is restricted to the Meteor on the apparent grounds that few Monterey customers would want it in the first place.

Normal axle ratios are an even 3.00 with either automatic and 3.56 with the manual. While not listed as a regular option, 3.56 might be a good choice with the 292 engine and automatic transmission. It would allow the small V-8 to perform more efficiently with no great loss in economy. For those who really want to play games, the whole line of Ford ratios should fit the Mercury. Fifteen in number, they range from the stock 3.00 to a brutal 5.83!

Beyond its sound basic design, the Mercury showed careful attention to detail. This was particularly evident in the 300-hp sedan, which had full power equipment and air conditioning. Despite the extra plumbing under its hood, the engine was accessible and relatively easy to work on.

Inside, there were two small touches worth noting. The driver's set of controls for the power windows was clearly marked so that he did not have to fumble trying to find which button operated which window. And the warning light for the parking brake blinked on and off instead of just glowing steadily, making it impossible to ignore.

Along the side of the body, the Monterey has an exclusive idea that others might copy profitably. A rubber strip was set into the chrome trim to prevent nicks and scrapes from other cars' doors in crowded parking lots.

Against such thoughtful planning, one major weakness stood out in sharp contrast. The 16-cubic-foot trunk was poorly designed. While long and wide, it was squashed into such a shallow shape that only a few pieces of normal luggage would fit. Fortunately, the spare tire was out of the way, on the kick-up over the rear axle, so that the larger part of the compartment was clear for cargo. But even this did not compensate for basically poor proportions.

/MT

**SEE TEST DATA ON PAGE 52**





*Both test cars were driven extensively, revealing some changes in performance and handling. New frame also makes a difference inside the passenger compartment.*

PHOTOS BY RANDY HOLT

**O**LDSMOBILE was an early entry in the performance race, and a few years ago both 88's and 98's ranked near the top of the hot performers. Recently, however, the line has relatively composed itself about power and offered a car that was moderate in performance, while strongly emphasizing overall luxuriousness. Luxury seems to be gradually replacing performance in the medium-priced class of cars and if MOTOR TREND's two test cars are an accurate indication, Oldsmobile is also an early proponent of this trend.

One of the test cars was a four-door Dynamic 88 hardtop; the other Oldsmobile, a 98, had identical body styling. Both cars had practically every power accessory available, including air conditioning, and the 98 even had power window vents. This may indicate that regular production models will be more deluxe than plain, since in the past test cars have been fairly representative of the type of cars being presented in dealers' showrooms.

Powering the 88 is Oldsmobile's 394-cubic-inch ohv V-8, which replaces the 371-cubic-inch engine offered last year. This powerplant is now the basic engine for all series, and



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the regular-fuel version for the Dynamic 88, with a two-barrel carburetor and a compression ratio of 8.8-to-1, produces 250 hp at 4400 rpm and 405 lbs.-ft. of torque at 2400 rpm. The 98 is powered by a four-barrel-carburetor version with the compression upped to 10. There is a slight increase in horsepower ratings this year, to 325 hp at 4600 rpm, plus 435 lbs.-ft. of torque at 2800, but since no substantial changes have been made, the effective power produced is relatively unchanged.

As might be expected, the power accessories and their extra weight limit Oldsmobile's performance. Yet both cars were rated in the moderately hot division. What did come as a minor surprise was the lack of significant difference separating the two models at the 0-60-mph mark. At this point the 98 was only one second faster. This is best explained by the weight difference, although the axle ratios, 2.87 for the 88 and 3.23 for the 98, apparently compensated for some of the extra poundage.

Another somewhat unusual aspect of the test was the economy figure recorded by the two cars. Less than one mpg separated the hardtops and their range, 10 to 14 mpg, is identical. This isn't so surprising when it is remembered that both engines are the same basic powerplant, with identical displacements. The only economy advantage would be the difference in price of regular fuel for the 88 and the premium fuel that the 98 requires.

Both the performance and economy computations require some further explanation. The performance is slightly improved over last year, although this amounts to less than a second at the 0-60-mph mark. On the other hand, the mpg figure is

*continued on page 47*

# OLDSMOBILE

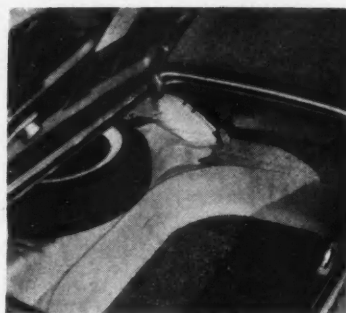
THE COUNT-DOWN FROM 98 TO  
88 SINGLES OUT FEATURES LONG  
FAMILIAR TO OLDS DRIVERS

*New frame means a step down in front passenger area, but a more important change is the elimination of the dogleg, greatly improving entry and exit.*

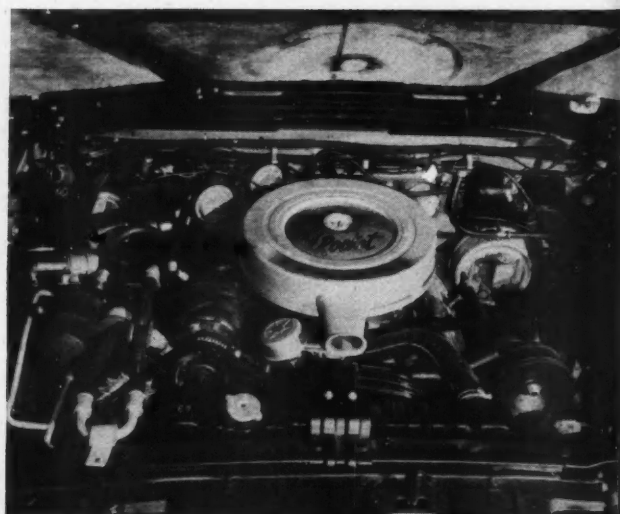


*Instrument cluster, which still retains a lot of flavor from previous Oldsmobile designs, was rated only average in both legibility and practicality.*

*When equipped with air conditioning, Oldsmobile's engine compartment becomes extremely cluttered, greatly increasing the time necessary to service or repair.*



*New trunk design, shared with some other GM cars, is undoubtedly one of the best arrangements in years.*



## OLDSMOBILE ROAD TEST

virtually unchanged. The primary reasons undoubtedly are found in the redesigned Hydramatic transmission.

Oldsmobile's new three-speed version of its familiar automatic weighs 75 pounds less and has 185 fewer parts than last year's four-speed. One important mechanical change is the addition of what is actually a torque converter, although Oldsmobile engineers call it a torque multiplier, while the sales department prefers the more euphemistic "Accel-A-Rotor." The torque multiplication is not as great as some converters, 1.3 times as opposed to a more usual 2.5 times. But it definitely has some effect on acceleration. Another important factor is found in the automatic's second gear arrangement. Shifting is done by pumping the oil out of the turbine and driving 100 per cent through gears, so there are no fluid losses at all in second. Together, these two facts undoubtedly account for the slight improvement in acceleration and the unchanged economy.

Oldsmobile's switch to coil springs in the rear suspension this year has caused some concern among the line's enthusiasts who preferred the old leaf spring arrangement. The ride in the test cars, however, proved that these fears are unfounded. Oldsmobile uses a four-link layout with the wheels supported on arms that trail almost straight back. Sideways position of the body in relation to the axle is controlled by diagonal arms that pivot on the frame and differential case.

This is a good arrangement and the ride is relatively unchanged, although it might be a trifle softer than in the past. At high speeds there is good stability, both in high crosswinds and in overcoming centrifugal force on curves taken at fast speeds. There is almost no noticeable sideways body shift at normal highway speeds, although some slight pitching is evident. Nothing about Oldsmobile's high-speed ride is objectionable, however, and it was judged excellent in all respects.

At slower speeds and over uneven road surfaces the softer suspension absorbs normal bumps almost completely, and only an extra-harsh shock will transmit any rebound to the passengers.

The softer ride does have some effect on cornering. In this respect Oldsmobile is a little above average for its class. Normal corners can be taken with ease at the posted speed. Taking corners hard will produce body lean and tire squeal. This is not objectionable, however, and occurs only when the car is pushed past the safe limits for a given corner.

Power steering, with which both cars were equipped, is a moderate four turns lock-to-lock—the same as some other GM cars, but it does not feel the same. It is effortless, of course, and imparts little feel of the road. There is also a certain lack of preciseness. This is not to say that an Oldsmobile can't be driven where the driver steers, rather it is largely due to the ratio, which takes so much work out of the driver's hands he does not always realize how much turning is actually going on. This is in line with what many drivers think the steering on a luxury car should be—on the other hand, some persons will find it far too easy for their liking.

All these characteristics are justly expected from a car that adequately fulfills the concept of a medium-priced luxury automobile. Good performance, fair economy and an excellent ride with some sacrifice to handling. Oldsmobile has this, and the test cars were ample proof that the line is well committed to the luxury image. But this was made more apparent inside both cars.

While Oldsmobile's external dimensions have shrunk—the 88, for instance, is approximately six inches shorter and three inches lower and narrower—inside dimensions are almost the same as they were last year. Even so the passenger compartment is roomier. This comes partly from the re-engineered Hydramatic. The diameter of the turbine was reduced 3½ inches, resulting in a lower transmission hump.

But reducing the size outside while retaining generous measurements inside comes from one of the line's most radical engineering changes. Oldsmobile has gone to a box-shaped frame with widespread side rails that run along the outside of the floor pan. Since there is no crossmember under the transmission, the front seat area has a low, step-down floor. Moreover, seat benches are nearly chair height, while headroom is within a fraction of an inch of what it was last year. This means that comfort is somewhat improved, although the physical dimensions don't prove it.

Of course, there is the problem of frame torsional stiffness, but Oldsmobile engineers have solved this with extra-sturdy sections at the front and back of the side members. Theoretically speaking, this may not be as sturdy as some other types of frames, but the difference is insignificant and it is doubtful if any driver will ever notice the difference.

Both test cars were well finished inside with luxurious materials, good workmanship and taste in selecting the color scheme. In this area Oldsmobile proves further that it is emphasizing luxury more than any other single quality. Overall, the upholstery and the trim detail were ornate without being ostentatious, an evaluation that some cars in Oldsmobile's class cannot claim.

Oldsmobile's dash panel retains many of the major features of last year, with the changes being made mainly for model year identity. The instrument cluster is showy without being extraordinarily practical. The speedometer is a thermometer-type bar arrangement, which was judged difficult to read accurately while driving.

Incidentally, the new frame, plus moving the gas tank forward, caused a reduction in the cubic capacity of the trunk, but it is doubtful if anyone will complain. The redesign of the trunk made it more practical than it has ever been with an excellent cargo space that even the poorest judge of how to arrange luggage can load easily and efficiently.

Power train options to improve the Oldsmobile's economy are practically unobtainable and the combination on MOTOR TREND's test 88 is the most common. A synchromesh transmission with a 3.42 axle gearset, available only on the 88, would make a significant difference. For those interested in better performance a two-barrel-carburetor version of the 394 is available with a 10-to-1 compression ratio which produces 275 hp at 4200 rpm and 415 lbs.-ft. of torque at 2400 rpm. But an even more significant difference would be made by selecting the four-barrel option that is standard in the 98. Any version of the 394-cubic-inch V-8 is available in the 88 series with the synchromesh transmission.

No performance or economy options are listed for the 98 and it is doubtful if either of the less powerful versions would be a wise choice—economy would probably not be better and performance would suffer. Nor are there any axle ratios listed as rpo's, although someone with a special problem could probably go through the factory and obtain a 2.87, 3.08 or 3.42 which are listed for the 88.

The final evaluation of Oldsmobile, after all the test figures were in and judged, shows that the line is moving gradually toward a luxury image more than anything else. This was amplified by the recent announcement that Oldsmobile would offer a convertible with bucket seats, console and deluxe interior. This is a step in the direction that Chrysler has taken with its 300 series and Ford with its Thunderbird. Apparently this proves the judgment of the test cars and may well be an accurate sign of the direction Oldsmobile will take in the future.

/MT

SEE TEST DATA ON PAGE 52



# FULL RANGE ROAD TEST

**PONTIAC'S SPECTACULAR OPTIONS** are wrapped in smaller packages for '61. Ten engines, four transmissions and seven axle ratios make up the basic power trains for the new model which, in all four series, is 3.7 inches shorter and 2.5 inches narrower than it was last year.

Though reduced in overall size, all-new frame and body designs allow more comfortable seating while shorter wheelbases have improved cornering ability.

The two Pontiacs tested by MOTOR TREND were alike in many ways; both were four-door hardtops with standard 389-cubic-inch powerplants and Hydramatic drive. Yet one had a 119-inch wheelbase, 210-inch length, 267-hp engine and three-speed transmission while the other had 123 inches between the wheels, 217 inches overall, 303 hp and four speeds forward!

The smaller car was a Catalina with its normal Hydramatic power train and the big one a Bonneville with its standard automatic drive combination. Engineered for similar conditions, they scored only 1.4 seconds apart in 0-60 time.

Pontiac's lowest-priced series, the Catalina comes in five body types, from two-door sedan to convertible. Sharing the short wheelbase, the Ventura is fancier but appears only in two hardtop styles. Next is the Star Chief with a pair of four-door bodies on the long chassis and, finally, the Bonneville tops the line with two hardtops and a convertible.

Standard engines differ according to series and type of transmission. In the manually-gearbed Catalina, Ventura and Star Chief, a 215-hp unit is normally fitted while the stick shift Bonneville sports a 235-hp job. With Hydramatic, 267 hp is specified for the Catalina and Ventura, 283 for the Star Chief and 303 for the Bonneville.

From these combinations, MT chose two of the most popular. The 267-hp/Hydramatic Catalina had a numerically low 2.69 axle but that didn't keep it from turning in creditable acceleration times. It averaged 3.5, 6.5 and 10.2 seconds, respectively, during its 0-30, 0-45 and 0-60 runs. Its fuel consumption range was 11-15 mpg, though one stretch of moderate cruising yielded 17.9 mpg.

The Bonneville completed its 303-hp/Hydramatic train with a 2.87 axle. Its 0-30 figure of 3.3 seconds and 0-45 of 5.7 were only slightly faster than the Catalina's but its 0-60 time of 8.8 seconds was definitely in the hot category. The reason its lower-speed acceleration wasn't better was wheel-spin caused by the engine's heavy torque output. Even with conservative rear end gearing, revving the engine for a quick start invariably broke the rear wheels loose.

Economy figures for the Bonneville were average for a car of its power, 10 to 14 mpg.

Optionally, the automatic-equipped Catalina and Ventura can be had with 287 hp and the Star Chief with the Bonneville's 303. In all series, a 230-hp economy mill is available with Hydramatic while 318-, 333- and 348-hp high-performance units are offered with both manual and automatic gearboxes.

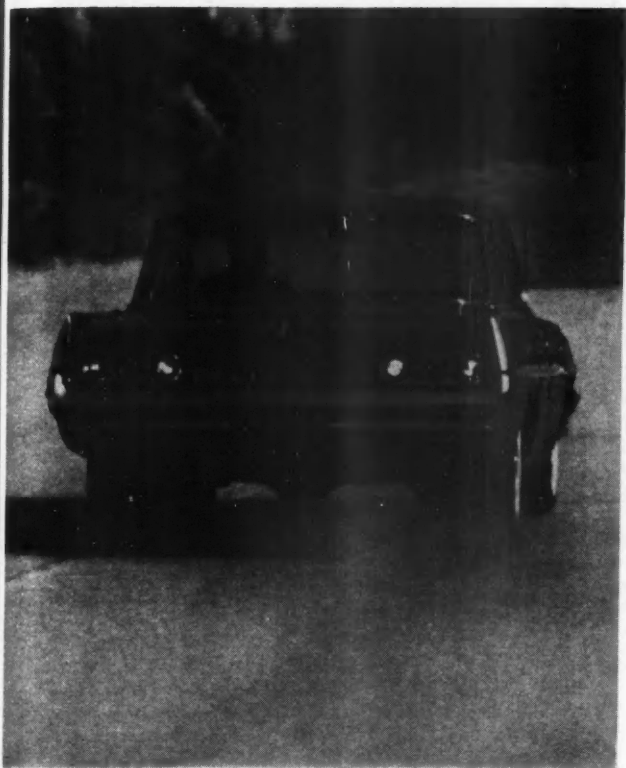
Altogether, there are 10 different powerplants, though Pontiac claims 11! If the factory can't keep them straight, who can? The discrepancy is explained by separate listings of the 303-hp/Hydramatic as standard for the Bonneville and optional for the Star Chief.

Still further possibilities exist for out-and-out racing conversions. Pontiac authorizes special parts packages that raise output as high as 363 hp. These are dealer-installed, however,

PHOTOS BY AL PALACY







*A succession of hard stops will cause brake fade but a Pontiac option, special aluminum wheels with integral brake drums, alleviates the problems for hard driving.*

and are not available directly from the factory.

All Pontiac V-8's, from 215- to 363-hp, are based on the same block which, with a 4.06-inch bore and 3.75-inch stroke, displaces 389 cubic inches. By varying such items as carburetion, compression and cam grind, the different ratings are brought into being.

Single two-barrel carburetors are used on the 215, 230, 267 and 283; single four-barrels on the 235, 287, 303 and 333; and triple two-barrels, Pontiac's famed Tri-Power, on the 318 and 348. Compression ratios are 8.6, allowing the use of regular fuel, in the 215, 230 and 235; 10.25 in the 267, 283 and 303; and 10.75 in the 318, 333 and 348.

Similarly, there are four basic camshafts, ranging from a 38-degree overlap and .33-inch lift in the normal stick shift engines to 60 degrees and .40 inch in the two hottest options.

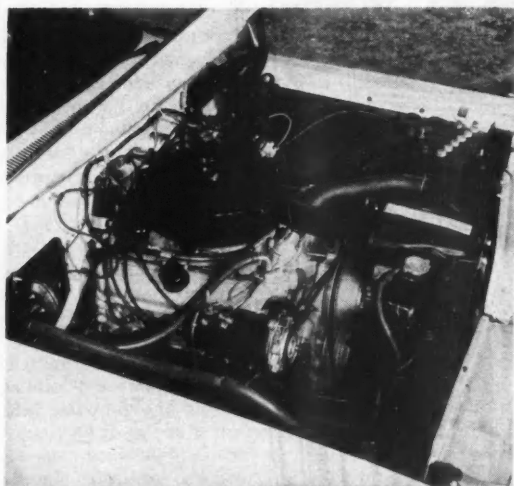
Transmission choices include an all-new, three-speed Hydramatic as well as the familiar four-speed version, plus three- and four-speed manuals.

Supplied in the Catalina and Ventura only, the new Hydramatic is the same as Oldsmobile's latest unit and combines a torque converter with a three-speed planetary gearset. In principle, it resembles the Borg-Warner and Chrysler automatics, though it differs in converter design. The blades are flat instead of angled, allowing a maximum stall ratio of only 1.2, about half the usual figure.

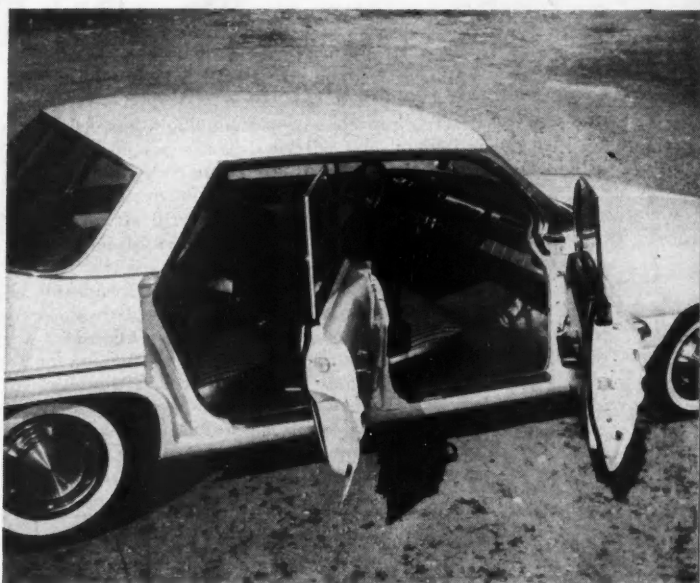
There are three forward ranges, low and two drives. Low engages first gear only, intermediate drive first and second and normal drive all three gears.

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## Still a DISTINCTIVE PACKAGE with its eye on PERFORMANCE

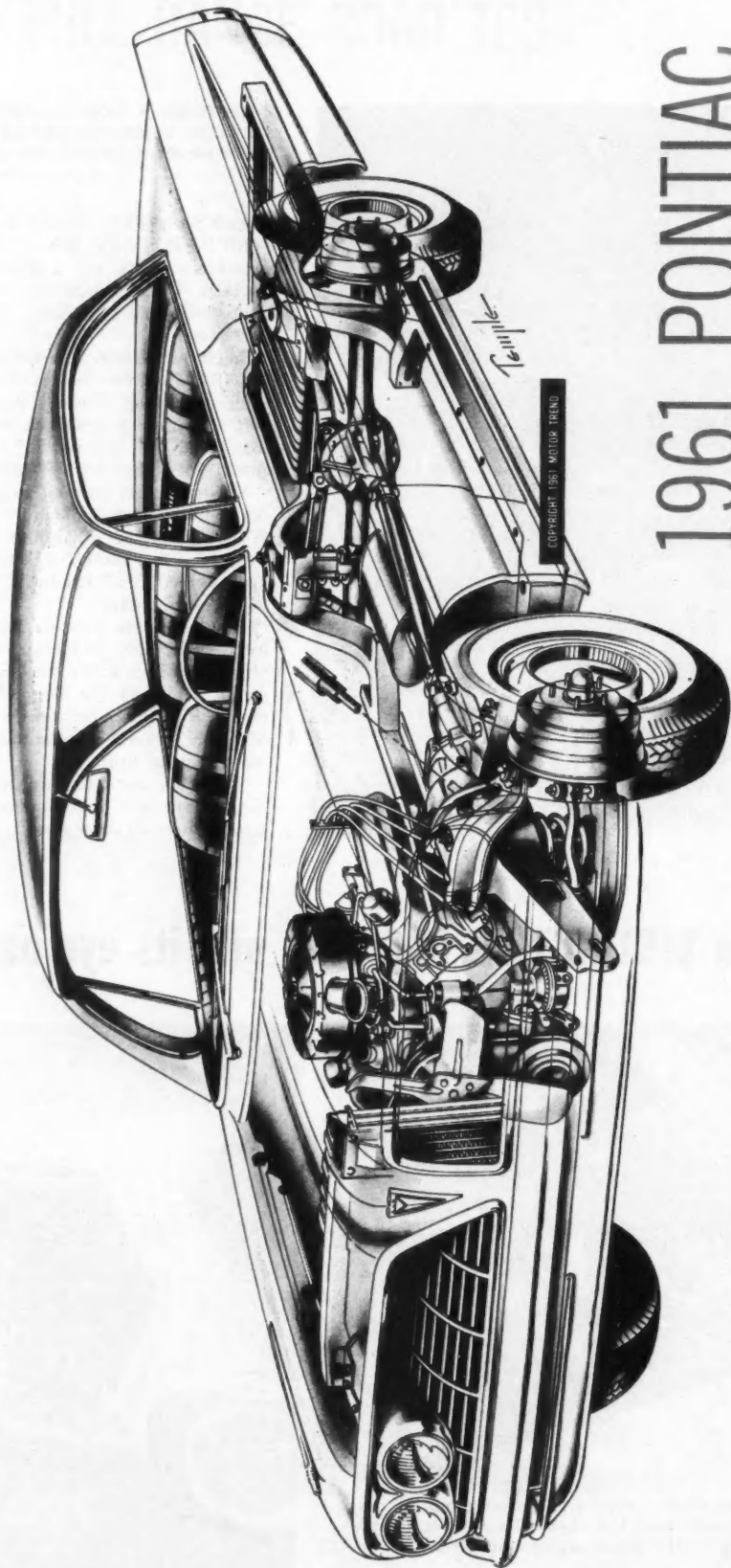


*All Pontiac engines are based on same basic block, a 389-cubic-inch V-8. And all series have same new bodies, with bigger doors and deeper floors.*

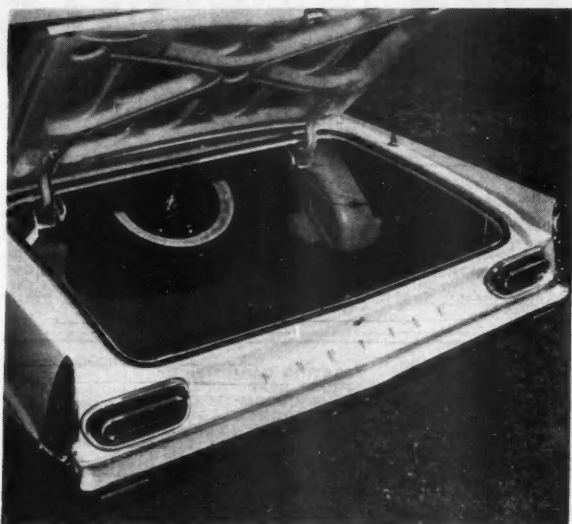


# motor trend

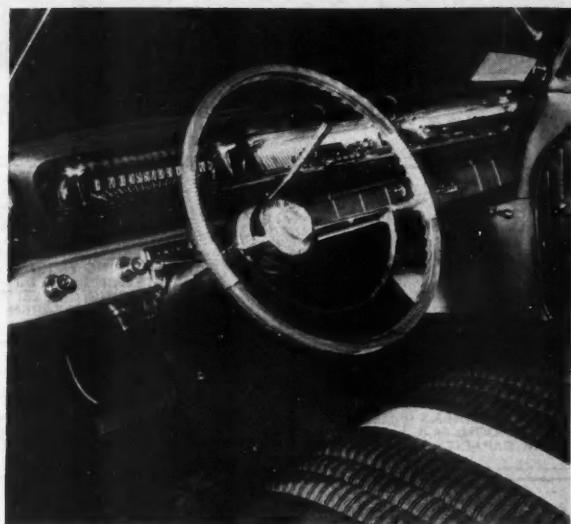
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## 1961 PONTIAC



*Spare tire is carried on kick-up over axle in Catalina, at left side of trunk floor in Bonneville. Both test cars were noted for spacious compartments, good access.*



*The clean dash layout features a recessed housing for driving instruments, radio and clock. An added luxury in the Bonneville is the passenger grab handle.*

Four-speed Hydramatic has been retained for the Star Chief and Bonneville. Shared with Cadillac, it consists of a fluid coupling and planetary gears. All four ratios function in all three ranges, the differences being in shift points. Low, for example, raises the rpm necessary for a shift to second, so the car remains in first at higher road speeds.

Apparently because a special driveshaft would be required, the bigger automatic is not fitted to the shorter chassis.

During normal driving, there was no perceptible difference between the two Hydramatics. The smaller unit had the same smooth, almost slippery shift characteristics as the older four-speed design.

All series have a three-speed manual transmission as standard equipment. A heavy-duty version is used in the Star Chief and Bonneville and with the 318-, 333- and 348-hp engines in the Catalina and Ventura. These same three powerhouses can also be coupled to a four-speed stick shift.

With the automatics, the usual axle ratios are 2.56, 2.69, 2.87 and 3.08 while the manuals are supplied with 3.08, 3.23, 3.42 and, on special order, 3.64. Rear ends for racing, extending to 4.89, are also offered.

The transmissions are smaller than their '60 counterparts but appear to take up more interior space because of a depressed floor. A completely new box frame has replaced last year's "X" structure and allows lower floor levels in both front and rear compartments. With seats about the same height from the ground, passengers ride more erectly and comfortably.

The improved position is especially valuable for the driver, who can place himself within easy reach of the pedals without being too close to the steering wheel. And that enables him to take full advantage of an important Pontiac feature, its superior roadability.

Because of its shorter wheelbase, the Catalina cornered somewhat better than the Bonneville but both cars had handling qualities near the best in their class. Tight turns were negotiated smoothly and precisely with very little body sway and virtually no front end mushiness. Under severe conditions, there was some uncertainty at the rear. The outside wheel would not maintain consistent traction. It would break, then regain its grip only to break again, all without warning.

The power steering was lively and accurate though a bit too slow, 4.25 turns lock-to-lock, for really fast corrections.

Frequent stops in succession caused the brake fade expected

in a big U.S. car but Pontiac has an option to alleviate it, special aluminum wheels with integral brake drums. Lighter and quicker-cooling than standard wheel-brake assemblies, they provide an extra margin of safety for hard driving.

For all their handling stability, both Pontiacs also rode very comfortably. Soft coil springs at all four wheels absorbed most road shocks, including sudden changes in surface, with little noise, or vibration. The only complaint was a tendency to float at moderate cruising speeds.

How are superior handling and riding qualities combined in the same car? Good suspension geometry is one reason but, in Pontiac's case, extremely wide tread is also an important factor. At 62.5 inches, the make has the broadest stance in the industry. By spreading each set of wheels so far apart, stability is increased without sacrificing comfort. Low spring rates can be retained. In other words, Pontiac's "wide track" does just what the manufacturer claims.

Both test cars had the same basic body shell and, for all practical purposes, the same interior dimensions. The Bonneville's greater length had no functional value, except to add 2.8 cubic feet of trunk space.

The trunk, incidentally, did not have the dropped floor found in some other GM makes this year. Still, it was well proportioned and would hold plenty of cargo. The spare tire was carried on the kick-up over the axle in the Catalina but, because that spot would be hard to reach in the longer-tailed Bonneville, the big car had it on the compartment floor.

From the driver's point of view, two important features were the oval-shaped steering wheel that, in the straight-ahead position allowed greater leg clearance and a clean, easy-to-read instrument layout. The Bonneville added a worthwhile touch to the dash, a grab handle on the passenger's side.

The driving instruments, radio and clock were all recessed to minimize reflections though, with a high sun, the radio grille cast a distracting image into the windshield. The legible speedometer was flanked by an ammeter and fuel gauge while warning lights alerted the driver to any irregularities in temperature or oil pressure. As an accessory, the fuel gauge can be supplemented with a light that shows when the tank is less than an eighth full.

/MT

**SEE TEST DATA ON PAGE 52**



# MOTOR TREND TEST DATA

TEST CAR: Buick Le Sabre  
BODY TYPE: 4-door sedan  
BASE PRICE: \$3107

OVERALL LENGTH: 213.2 inches  
OVERALL WIDTH: 78 inches  
OVERALL HEIGHT: 56.3 inches  
WHEELBASE: 123 inches  
TREAD, FRONT/REAR: 62 and 61 inches  
SHIPPING WEIGHT: 4129 lbs.  
STEERING: 4 turns lock-to-lock  
TURNING CIRCLE: 44 feet curb-to-curb  
GROUND CLEARANCE: 5.5 inches

SEATING CAPACITY: Six  
FRONT SEAT  
HEADROOM: 34.5 inches  
HIPROOM: 63.3 inches  
LEGROOM: 44.8 inches  
TRUNK CAPACITY: 16.2 cubic feet

TYPE: Ohv V-8  
DISPLACEMENT: 364 cubic inches  
BORE & STROKE: 4.125 x 3.4  
COMPRESSION RATIO: 10.25-to-1  
CARBURETION: Single 2-barrel  
HORSEPOWER: 250 @ 4400 rpm  
TORQUE: 384 @ 2400 rpm  
TRANSMISSION: Automatic  
REAR AXLE RATIO: 3.07

GAS MILEAGE: 14 to 18 miles per gallon  
ACCELERATION: 0-30 mph in 3.9 seconds,  
0-45 mph in 7.1 seconds and 0-60 mph  
in 10.6 seconds  
SPEEDOMETER ERROR: Indicated 30, 45  
and 60 mph are actual 30, 44.5 and 59.5  
mph respectively  
ODOMETER ERROR: Indicated 100 miles is  
actual 101 miles  
WEIGHT-POWER RATIO: 16.5 lbs. per horse-  
power  
HORSEPOWER PER CUBIC INCH: .687

TEST CAR: Chrysler New Yorker  
BODY TYPE: 4-door sedan  
BASE PRICE: \$4123

OVERALL LENGTH: 219.8 inches  
OVERALL WIDTH: 79.4 inches  
OVERALL HEIGHT: 55.6 inches  
WHEELBASE: 126 inches  
TREAD, FRONT/REAR: 61.2 and 60 inches  
SHIPPING WEIGHT: 4055 lbs.  
STEERING: 3.5 turns lock-to-lock  
TURNING CIRCLE: 46.6 feet curb-to-curb  
GROUND CLEARANCE: 5.7 inches

SEATING CAPACITY: Six  
FRONT SEAT  
HEADROOM: 37.1 inches  
HIPROOM: 63.8 inches  
LEGROOM: 45.3 inches  
TRUNK CAPACITY: 18 cubic feet

TYPE: Ohv V-8  
DISPLACEMENT: 413 cubic inches  
BORE & STROKE: 4.18 x 3.75  
COMPRESSION RATIO: 10-to-1  
CARBURETION: Single 4-barrel  
HORSEPOWER: 350 @ 4600 rpm  
TORQUE: 470 @ 2800 rpm  
TRANSMISSION: Automatic  
REAR AXLE RATIO: 2.93

GAS MILEAGE: 10 to 14 miles per gallon  
ACCELERATION: 0-30 mph in 3.9 seconds,  
0-45 mph in 6.6 seconds and 0-60 mph  
in 9.8 seconds  
SPEEDOMETER ERROR: Indicated 30, 45  
and 60 mph are actual 31, 46 and 61  
mph respectively  
ODOMETER ERROR: Indicated 100 miles is  
actual 97.5 miles  
WEIGHT-POWER RATIO: 11.6 lbs. per horse-  
power  
HORSEPOWER PER CUBIC INCH: .744

TEST CAR: Dodge Polara  
BODY TYPE: 4-door hardtop  
BASE PRICE: \$3110

OVERALL LENGTH: 212.5 inches  
OVERALL WIDTH: 78.7 inches  
OVERALL HEIGHT: 54.9 inches  
WHEELBASE: 122 inches  
TREAD, FRONT/REAR: 61.5 and 60.2 inches  
SHIPPING WEIGHT: 3740 lbs.  
STEERING: 3.5 turns lock-to-lock  
TURNING CIRCLE: 43.9 feet curb-to-curb  
GROUND CLEARANCE: 5.3 inches

SEATING CAPACITY: Six  
FRONT SEAT  
HEADROOM: 33.3 inches  
HIPROOM: 63.8 inches  
LEGROOM: 45.1 inches  
TRUNK CAPACITY: 17.7 cubic feet

TYPE: Ohv V-8  
DISPLACEMENT: 383 cubic inches  
BORE & STROKE: 4.25 x 3.38  
COMPRESSION RATIO: 10-to-1  
CARBURETION: Single 4-barrel  
HORSEPOWER: 325 @ 4600 rpm  
TORQUE: 425 @ 2800 rpm  
TRANSMISSION: Automatic  
REAR AXLE RATIO: 3.23

GAS MILEAGE: 10 to 14 miles per gallon  
ACCELERATION: 0-30 mph in 3.6 seconds,  
0-45 mph in 5.7 seconds and 0-60 mph  
in 8.9 seconds  
SPEEDOMETER ERROR: Indicated 30, 45  
and 60 mph are actual 29.5, 44 and 58  
mph respectively  
ODOMETER ERROR: Indicated 100 miles is  
actual 102.2 miles  
WEIGHT-POWER RATIO: 11.5 lbs. per horse-  
power  
HORSEPOWER PER CUBIC INCH: .848

TEST CAR: Buick Invicta  
BODY TYPE: 4-door hardtop  
BASE PRICE: \$3515

OVERALL LENGTH: 213.2 inches  
OVERALL WIDTH: 78 inches  
OVERALL HEIGHT: 56.3 inches  
WHEELBASE: 123 inches  
TREAD, FRONT/REAR: 62 and 61 inches  
SHIPPING WEIGHT: 4179 lbs.  
STEERING: 4 turns lock-to-lock  
TURNING CIRCLE: 44 feet curb-to-curb  
GROUND CLEARANCE: 5.5 inches

SEATING CAPACITY: Six  
FRONT SEAT  
HEADROOM: 34.5 inches  
HIPROOM: 63.3 inches  
LEGROOM: 44.8 inches  
TRUNK CAPACITY: 16.2 cubic feet

TYPE: Ohv V-8  
DISPLACEMENT: 401 cubic inches  
BORE & STROKE: 4.188 x 3.64  
COMPRESSION RATIO: 10.25-to-1  
CARBURETION: Single 4-barrel  
HORSEPOWER: 325 @ 4400 rpm  
TORQUE: 445 @ 2800 rpm  
TRANSMISSION: Automatic  
REAR AXLE RATIO: 3.23

GAS MILEAGE: 12 to 16 miles per gallon  
ACCELERATION: 0-30 mph in 3.4 seconds,  
0-45 mph in 5.6 seconds and 0-60 mph  
in 8.8 seconds  
SPEEDOMETER ERROR: Indicated 30, 45  
and 60 mph are actual 27.5, 41 and 55.5  
mph respectively  
ODOMETER ERROR: Indicated 100 miles is  
actual 102 miles  
WEIGHT-POWER RATIO: 12.5 lbs. per horse-  
power  
HORSEPOWER PER CUBIC INCH: .810

TEST CAR: Chrysler Newport  
BODY TYPE: 4-door hardtop  
BASE PRICE: \$3104

OVERALL LENGTH: 215.6 inches  
OVERALL WIDTH: 79.4 inches  
OVERALL HEIGHT: 54.9 inches  
WHEELBASE: 122 inches  
TREAD, FRONT/REAR: 61 and 59.7 inches  
SHIPPING WEIGHT: 3710 lbs.  
STEERING: 3.5 turns lock-to-lock  
TURNING CIRCLE: 44 feet curb-to-curb  
GROUND CLEARANCE: 5.2 inches

SEATING CAPACITY: Six  
FRONT SEAT  
HEADROOM: 37.6 inches  
HIPROOM: 63.8 inches  
LEGROOM: 45.1 inches  
TRUNK CAPACITY: 18 cubic feet

TYPE: Ohv V-8  
DISPLACEMENT: 361 cubic inches  
BORE & STROKE: 4.12 x 3.38  
COMPRESSION RATIO: 9-to-1  
CARBURETION: Single 2-barrel  
HORSEPOWER: 265 @ 4400 rpm  
TORQUE: 380 @ 2400 rpm  
TRANSMISSION: Automatic  
REAR AXLE RATIO: 2.93

GAS MILEAGE: 12 to 16 miles per gallon  
ACCELERATION: 0-30 mph in 3.5 seconds,  
0-45 mph in 6.4 seconds and 0-60 mph  
in 9.6 seconds  
SPEEDOMETER ERROR: Indicated 30, 45  
and 60 mph are actual 29.5, 44.5 and  
59 mph respectively  
ODOMETER ERROR: Indicated 100 miles is  
actual 101 miles  
WEIGHT-POWER RATIO: 14.1 lbs. per horse-  
power  
HORSEPOWER PER CUBIC INCH: .697

TEST CAR: Dodge Polara  
BODY TYPE: Convertible  
BASE PRICE: \$3252

OVERALL LENGTH: 212.5 inches  
OVERALL WIDTH: 78.7 inches  
OVERALL HEIGHT: 55.1 inches  
WHEELBASE: 122 inches  
TREAD, FRONT/REAR: 61.5 and 60.2 inches  
SHIPPING WEIGHT: 3765 lbs.  
STEERING: 3.5 turns lock-to-lock  
TURNING CIRCLE: 43.9 feet curb-to-curb  
GROUND CLEARANCE: 5.3 inches

SEATING CAPACITY: Five  
FRONT SEAT  
HEADROOM: 34.6 inches  
HIPROOM: 63.8 inches  
LEGROOM: 45.1 inches  
TRUNK CAPACITY: 13.4 cubic feet

TYPE: Ohv V-8  
DISPLACEMENT: 361 cubic inches  
BORE & STROKE: 4.12 x 3.38  
COMPRESSION RATIO: 9-to-1  
CARBURETION: Single 2-barrel  
HORSEPOWER: 265 @ 4400 rpm  
TORQUE: 380 @ 2400 rpm  
TRANSMISSION: Automatic  
REAR AXLE RATIO: 2.93

GAS MILEAGE: 11 to 15 miles per gallon  
ACCELERATION: 0-30 mph in 3.8 seconds,  
0-45 mph in 6.3 seconds and 0-60 mph  
in 10.1 seconds  
SPEEDOMETER ERROR: Indicated 30, 45  
and 60 mph are actual 28.5, 42 and 55  
mph respectively  
ODOMETER ERROR: Indicated 100 miles is  
actual 94.5 miles  
WEIGHT-POWER RATIO: 14.2 lbs. per horse-  
power  
HORSEPOWER PER CUBIC INCH: .734



# -THE MIDDLE-PRICE CARS

<b>TEST CAR:</b> Mercury Monterey <b>BODY TYPE:</b> 4-door sedan <b>BASE PRICE:</b> \$2869	<b>TEST CAR:</b> Oldsmobile Dynamic 88 <b>BODY TYPE:</b> 4-door hardtop <b>BASE PRICE:</b> \$3034	<b>TEST CAR:</b> Pontiac Bonneville <b>BODY TYPE:</b> 4-door hardtop <b>BASE PRICE:</b> \$3331 <b>TEST CAR</b>
<b>OVERALL LENGTH:</b> 214.6 inches <b>OVERALL WIDTH:</b> 79.9 inches <b>OVERALL HEIGHT:</b> 55 inches <b>WHEELBASE:</b> 120 inches <b>TREAD, FRONT/REAR:</b> 61 and 60 inches <b>SHIPPING WEIGHT:</b> 3875 lbs. <b>STEERING:</b> 3.9 turns lock-to-lock <b>TURNING CIRCLE:</b> 41.6 feet curb-to-curb <b>GROUND CLEARANCE:</b> 5.7 inches	<b>OVERALL LENGTH:</b> 212 inches <b>OVERALL WIDTH:</b> 77.2 inches <b>OVERALL HEIGHT:</b> 55.8 inches <b>WHEELBASE:</b> 123 inches <b>TREAD, FRONT/REAR:</b> 61 and 61 inches <b>SHIPPING WEIGHT:</b> 4024 lbs. <b>STEERING:</b> 4 turns lock-to-lock <b>TURNING CIRCLE:</b> 43 feet curb-to-curb <b>GROUND CLEARANCE:</b> 5.6 inches	<b>OVERALL LENGTH:</b> 217 inches <b>OVERALL WIDTH:</b> 78.2 inches <b>OVERALL HEIGHT:</b> 55.9 inches <b>WHEELBASE:</b> 123 inches <b>TREAD, FRONT/REAR:</b> 62.5 and 62.5 inches <b>SHIPPING WEIGHT:</b> 3895 lbs. <b>STEERING:</b> 4.25 turns lock-to-lock <b>TURNING CIRCLE:</b> 49.4 feet curb-to-curb <b>GROUND CLEARANCE:</b> 6 inches <b>MANEUVERABILITY FACTORS</b>
<b>SEATING CAPACITY:</b> Six <b>FRONT SEAT:</b> <b>HEADROOM:</b> 38.2 inches <b>HIPROOM:</b> 62.1 inches <b>LEGROOM:</b> 45.3 inches <b>TRUNK CAPACITY:</b> 16 cubic feet	<b>SEATING CAPACITY:</b> Six <b>FRONT SEAT:</b> <b>HEADROOM:</b> 34.5 inches <b>HIPROOM:</b> 63.3 inches <b>LEGROOM:</b> 44.4 inches <b>TRUNK CAPACITY:</b> 14.3 cubic feet	<b>SEATING CAPACITY:</b> Six <b>FRONT SEAT:</b> <b>HEADROOM:</b> 34.1 inches <b>HIPROOM:</b> 63.2 inches <b>LEGROOM:</b> 44.9 inches <b>TRUNK CAPACITY:</b> 19.2 cubic feet <b>INTERIOR ROOM</b>
<b>TYPE:</b> Ohv V-8 <b>DISPLACEMENT:</b> 390 cubic inches <b>BORE &amp; STROKE:</b> 4.05 x 3.78 <b>COMPRESSION RATIO:</b> 9.6-to-1 <b>CARBURETION:</b> Single 4-barrel <b>HORSEPOWER:</b> 300 @ 4600 rpm <b>TORQUE:</b> 427 @ 2800 rpm <b>TRANSMISSION:</b> Automatic <b>REAR AXLE RATIO:</b> 3.00	<b>TYPE:</b> Ohv V-8 <b>DISPLACEMENT:</b> 394 cubic inches <b>BORE &amp; STROKE:</b> 4.13 x 3.69 <b>COMPRESSION RATIO:</b> 8.8-to-1 <b>CARBURETION:</b> Single 2-barrel <b>HORSEPOWER:</b> 250 @ 4400 rpm <b>TORQUE:</b> 405 @ 2400 rpm <b>TRANSMISSION:</b> Automatic <b>REAR AXLE RATIO:</b> 2.87	<b>TYPE:</b> Ohv V-8 <b>DISPLACEMENT:</b> 389 cubic inches <b>BORE &amp; STROKE:</b> 4.06 x 3.75 <b>COMPRESSION RATIO:</b> 10.25-to-1 <b>CARBURETION:</b> Single 4-barrel <b>HORSEPOWER:</b> 303 @ 4600 rpm <b>TORQUE:</b> 425 @ 2800 rpm <b>TRANSMISSION:</b> 4-speed automatic <b>REAR AXLE RATIO:</b> 2.87 <b>ENGINE &amp; DRIVE TRAIN</b>
<b>GAS MILEAGE:</b> 10 to 14 miles per gallon <b>ACCELERATION:</b> 0-30 mph in 4.2 seconds, 0-45 mph in 7 seconds and 0-60 mph in 10.2 seconds <b>SPEEDOMETER ERROR:</b> Indicated 30, 45 and 60 mph are actual 30, 45 and 60 mph respectively <b>ODOMETER ERROR:</b> Indicated 100 miles is actual 100 miles <b>WEIGHT-POWER RATIO:</b> 12.9 lbs. per horse- power <b>HORSEPOWER PER CUBIC INCH:</b> .77	<b>GAS MILEAGE:</b> 10 to 14 miles per gallon <b>ACCELERATION:</b> 0-30 mph in 4.2 seconds, 0-45 mph in 7.4 seconds and 0-60 mph in 11.5 seconds <b>SPEEDOMETER ERROR:</b> Indicated 30, 45 and 60 mph are actual 28.5, 43 and 56.5 mph respectively <b>ODOMETER ERROR:</b> Indicated 100 miles is actual 100 miles <b>WEIGHT-POWER RATIO:</b> 16.3 lbs. per horse- power <b>HORSEPOWER PER CUBIC INCH:</b> .635	<b>GAS MILEAGE:</b> 10 to 14 miles per gallon <b>ACCELERATION:</b> 0-30 mph in 3.3 seconds, 0-45 mph in 5.7 seconds and 0-60 mph in 8.8 seconds <b>SPEEDOMETER ERROR:</b> Indicated 30, 45 and 60 mph are actual 30, 45 and 59.5 mph respectively <b>ODOMETER ERROR:</b> Indicated 100 miles is actual 98.7 miles <b>WEIGHT-POWER RATIO:</b> 12.89 lbs. per horsepower <b>HORSEPOWER PER CUBIC INCH:</b> .779 <b>PERFORMANCE</b>
<b>TEST CAR:</b> Mercury Monterey <b>BODY TYPE:</b> 4-door hardtop <b>BASE PRICE:</b> \$2941	<b>TEST CAR:</b> Oldsmobile 98 <b>BODY TYPE:</b> 4-door hardtop <b>BASE PRICE:</b> \$4021	<b>TEST CAR:</b> Pontiac Catalina <b>BODY TYPE:</b> 4-door hardtop <b>BASE PRICE:</b> \$2842 <b>TEST CAR</b>
<b>OVERALL LENGTH:</b> 214.6 inches <b>OVERALL WIDTH:</b> 79.9 inches <b>OVERALL HEIGHT:</b> 55 inches <b>WHEELBASE:</b> 120 inches <b>TREAD, FRONT/REAR:</b> 61 and 60 inches <b>SHIPPING WEIGHT:</b> 3832 lbs. <b>STEERING:</b> 3.9 turns lock-to-lock <b>TURNING CIRCLE:</b> 41.6 feet curb-to-curb <b>GROUND CLEARANCE:</b> 5.7 inches	<b>OVERALL LENGTH:</b> 218 inches <b>OVERALL WIDTH:</b> 77.2 inches <b>OVERALL HEIGHT:</b> 56.6 inches <b>WHEELBASE:</b> 126 inches <b>TREAD, FRONT/REAR:</b> 61 and 61 inches <b>SHIPPING WEIGHT:</b> 4208 lbs. <b>STEERING:</b> 4 turns lock-to-lock <b>TURNING CIRCLE:</b> 43.8 feet curb-to-curb <b>GROUND CLEARANCE:</b> 5.8 inches	<b>OVERALL LENGTH:</b> 210 inches <b>OVERALL WIDTH:</b> 78.2 inches <b>OVERALL HEIGHT:</b> 55.9 inches <b>WHEELBASE:</b> 119 inches <b>TREAD, FRONT/REAR:</b> 62.5 and 62.5 inches <b>SHIPPING WEIGHT:</b> 3800 lbs. <b>STEERING:</b> 4.25 turns lock-to-lock <b>TURNING CIRCLE:</b> 48.8 feet curb-to-curb <b>GROUND CLEARANCE:</b> 6 inches <b>MANEUVERABILITY FACTORS</b>
<b>SEATING CAPACITY:</b> Six <b>FRONT SEAT:</b> <b>HEADROOM:</b> 38.2 inches <b>HIPROOM:</b> 62.1 inches <b>LEGROOM:</b> 45.3 inches <b>TRUNK CAPACITY:</b> 16 cubic feet	<b>SEATING CAPACITY:</b> Six <b>FRONT SEAT:</b> <b>HEADROOM:</b> 35.2 inches <b>HIPROOM:</b> 63.6 inches <b>LEGROOM:</b> 44.1 inches <b>TRUNK CAPACITY:</b> 15.1 cubic feet	<b>SEATING CAPACITY:</b> Six <b>FRONT SEAT:</b> <b>HEADROOM:</b> 34.2 inches <b>HIPROOM:</b> 63.2 inches <b>LEGROOM:</b> 45.3 inches <b>TRUNK CAPACITY:</b> 16.4 cubic feet <b>INTERIOR ROOM</b>
<b>TYPE:</b> Ohv V-8 <b>DISPLACEMENT:</b> 292 cubic inches <b>BORE &amp; STROKE:</b> 3.75 x 3.30 <b>COMPRESSION RATIO:</b> 8.8-to-1 <b>CARBURETION:</b> Single 2-barrel <b>HORSEPOWER:</b> 175 @ 4200 rpm <b>TORQUE:</b> 279 @ 2200 rpm <b>TRANSMISSION:</b> Automatic <b>REAR AXLE RATIO:</b> 3.00	<b>TYPE:</b> Ohv V-8 <b>DISPLACEMENT:</b> 394 cubic inches <b>BORE &amp; STROKE:</b> 4.13 x 3.69 <b>COMPRESSION RATIO:</b> 10-to-1 <b>CARBURETION:</b> Single 4-barrel <b>HORSEPOWER:</b> 325 @ 4600 rpm <b>TORQUE:</b> 435 @ 2800 rpm <b>TRANSMISSION:</b> Automatic <b>REAR AXLE RATIO:</b> 3.23	<b>TYPE:</b> Ohv V-8 <b>DISPLACEMENT:</b> 389 cubic inches <b>BORE &amp; STROKE:</b> 4.06 x 3.75 <b>COMPRESSION RATIO:</b> 10.25-to-1 <b>CARBURETION:</b> Single 2-barrel <b>HORSEPOWER:</b> 267 @ 4200 rpm <b>TORQUE:</b> 405 @ 2400 rpm <b>TRANSMISSION:</b> 3-speed automatic <b>REAR AXLE RATIO:</b> 2.69 <b>ENGINE &amp; DRIVE TRAIN</b>
<b>GAS MILEAGE:</b> 12 to 16 miles per gallon <b>ACCELERATION:</b> 0-30 mph in 5.4 seconds, 0-45 mph in 9 seconds and 0-60 mph in 14.5 seconds <b>SPEEDOMETER ERROR:</b> Indicated 30, 45 and 60 mph are actual 30, 45 and 60 mph respectively <b>ODOMETER ERROR:</b> Indicated 100 miles is actual 101 miles <b>WEIGHT-POWER RATIO:</b> 21.9 lbs. per horse- power <b>HORSEPOWER PER CUBIC INCH:</b> .60	<b>GAS MILEAGE:</b> 10 to 14 miles per gallon <b>ACCELERATION:</b> 0-30 mph in 4 seconds, 0-45 mph in 7 seconds and 0-60 mph in 10.5 seconds <b>SPEEDOMETER ERROR:</b> Indicated 30, 45 and 60 mph are actual 29, 43.5 and 58 mph respectively <b>ODOMETER ERROR:</b> Indicated 100 miles is actual 95 miles <b>WEIGHT-POWER RATIO:</b> 13.1 lbs. per horse- power <b>HORSEPOWER PER CUBIC INCH:</b> .825	<b>GAS MILEAGE:</b> 11 to 15 miles per gallon <b>ACCELERATION:</b> 0-30 mph in 3.5 seconds, 0-45 mph in 6.5 seconds and 0-60 mph in 10.2 seconds <b>SPEEDOMETER ERROR:</b> Indicated 30, 45 and 60 mph are actual 29.5, 43 and 57 mph respectively <b>ODOMETER ERROR:</b> Indicated 100 miles is actual 94 miles <b>WEIGHT-POWER RATIO:</b> 14.23 lbs. per horse- power <b>HORSEPOWER PER CUBIC INCH:</b> .697 <b>PERFORMANCE</b>

# THREE LETTERS ARE THE KEY TO A SYSTEM OF CAR BUYING THAT LETS YOU BUILD THE CAR OF YOUR CHOICE

by John Christy

**I**F YOU HAVE LONG BEEN the sort of car buyer who has decided, for one or several objective and subjective reasons, on one new car and then delivered yourself into the tender hands of the local dealer with the request for "that red one in the corner," only to grow to detest the thing within months, take hope. You have only to learn the meaning of three letters in Detroit's alphabet soup. If you apply the lessons inherent therein you can now come up with a car you can continue to like and enjoy at least as long as the payments last or something else comes along to tickle your fancy.

The letters referred to are RPO. They stand for the words Regular Production Option and they mean that while the "red one in the corner" may please the eye and satisfy the immediate esthetics it isn't necessarily the car for you. On the other hand they also mean that one that looks equally good, one you might have to wait a week or so for, may be just the kind of transportation you have been seeking all these frustrating years.

Recently enough to be well within the memory of the youngest of us was the day when one looked over the latest offerings from Baghdad-on-the-Rouge, picked a make and model and that would have been that. The only further exercise of decision would have been that of picking a dealer who would give the best deal on the now-hated vehicle that was to form the trade-in, at which point buyer and bank became possessors and owners, respectively, of the car in question.

No longer. Once make and model have been decided on, the process of final selection has only begun. Once the final purchase depended only on a weighing and balancing of good and bad points with a measure of subjectivity thrown in to tilt the see-saw. Now one can, with proper application of the RPO set-up, factor out most or even all of the attributes of the car that contributed to the negative side of the choice, attributes that one was willing to endure for the sake of the advantages. In their place one can add new advantages that can even more heavily contribute to the positive side.

In brief, you can, with RPO list in hand — all you have to do is ask for it — design your own car within certain limits. This is not a process of modification nor is it a process where you buy a given automobile and throw away unwanted parts in order to purchase others. It is, rather, a process whereby you are in effect asking the manufacturer to assemble a given model

of automobile from available parts to suit your particular needs. Actually the car, except in rare instances, is not really assembled to order but is one of a set of varied assemblies for which the manufacturer has anticipated there will be a greater or lesser demand.

This is the way it works: It doesn't cost a manufacturer any more to build one item with a given set of characteristics, except on a basis of greater or lesser volume. With proper tooling he can build a certain number of such parts in a volume for which there will be an anticipated demand, then interrupt that line, reset the tooling and build a similar part in a second run. There is a cost differential, true, but this is minimal compared to modifying an existing part. The actual price is determined by the number produced of a given option. Where a large run on a given option is made the cost is lower. In cases where requests for a given option are few, the fewer are built and the cost is proportionately higher. However, in each case the cost is figured as an average above the cost of making the basic item such an option is designed to replace.

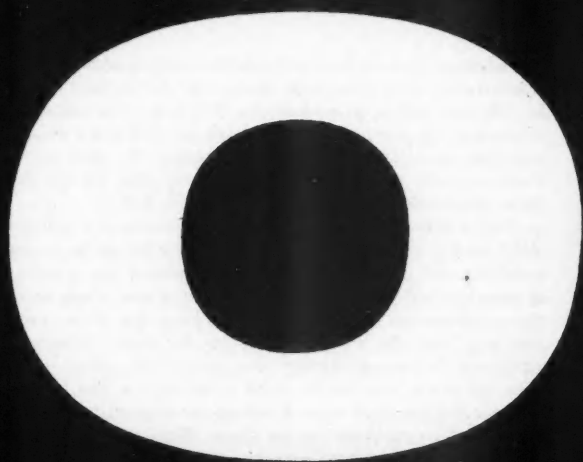
Very few absolutely basic automobiles are built for retail consumption, most of these going for fleet use. In almost all cases the car goes to the dealer and thence to the consumer with a set of listed options already installed. A typical case would be a sedan delivered, as most are, with automatic transmission, radio, heater and perhaps power steering. In addition to these major items can be added such minor bits and pieces as trim, bumperettes, fancier upholstery and the like. The result is that the cost price is in many cases as much as \$1,000 over the basic list price of the given model. By checking around, actually *shopping*, the prospective buyer — you — can come up with an average price that it would cost to walk in and tell the man you want "that one." Subtract from this figure the base delivered price of the car without any options at all and you come up with the figure that is the "cushion" or the budget left over from which to buy those options you feel you want.

Let us now suppose that you don't want all the "average" options. Let us instead suppose that you like the car but not in just that particular guise. You would, for instance, like something a little hotter than the car as normally offered. Perhaps you don't mind shifting for yourself. Perhaps you would like

*continued on page 56*

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These two cars look the same,  
but they act differently . . . .  
because one owner knew how  
to pick the right options



a heater but live in a climate where the super-deluxe unit is unnecessary — a basic one will do nicely. Further let us suppose you can't stand the stuff that comes over the local airwaves.

At this point, if you are in a hurry and can't resist the salesman who is eager to move one of a bunch of "average" optioned cars you can decide that you really don't need the extra performance you have always wanted. You can decide that you don't mind having a big, oil-filled mechanical box to do your shifting and that you don't really have to turn the radio on *ever* or that the heater need never be turned on full blast. In which case you have made a friend of the salesman, helped pay his and the dealer's grocery bill, wasted a great deal of your hard-earned money and have contracted to pay for a car you'll probably grow to loathe in a month or so.

Later you find out that your neighbor down the block has come up with just the car you really wanted — quicker, handier and with less luxurious but equally serviceable equipment. All very sad and all too common, too.

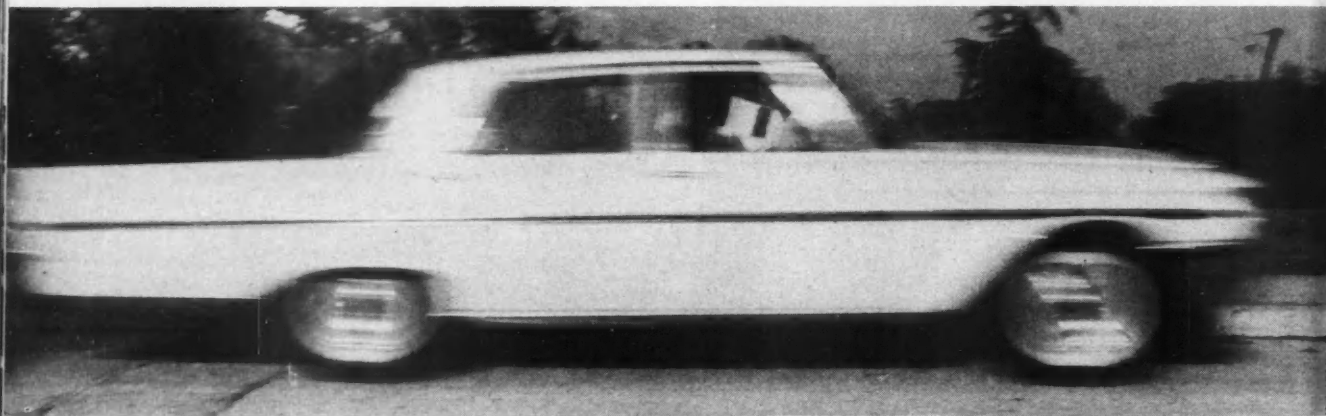
For the price of the unwanted accessories you were rushed into buying because you wanted that red one right now you could have had that power-pack, that tall cruising gear and that stick shift gearbox you could wiggle happily through three or even four speeds.

You weren't aware of this? Take solace in the fact that in

H-Power and the Hornet. At that time stock car racing was at its zenith and the factories, especially Hudson, found that the results had a great deal to do with sales. At first Hudson and then others began offering options and then outright support for racing. This was also accompanied by the beginning and growth of motor magazines, MT being among the first, and a public awareness that there was more to the automobile than four wheels, R, H & OD and an installment contract. What at first was strictly equipment for those who wanted to go stock car racing rapidly through demand and a "why not my car too?" attitude on the part of the buyer had to come under the option or at least the "Export" list.

However, it remained for Chevrolet to come out flat-footed and say that the buyer could "design" his own car, offering a string of options that would satisfy anyone from a timid maiden aunt to a drag strip demon and all points of enthusiasm in between. In part this was thanks to the Corvette and the string of options that became almost necessary. These, including brakes, four-speed gearbox, six different power-pack options and all kinds of hydraulic assists, were being built anyway, so why not offer them as passenger car options as well? Why not indeed?

The Chrysler Corporation was not far behind, though with a slightly different set-up in that complete car packages rather than a list of parts were offered, particularly in the Plymouth



## A NEW WAY TO CHANGE THE

your misery you are in considerable company. The greatest percentage of your fellow car buyers and, strangely enough, a high proportion of the gentlemen who sold them and you the cars, aren't aware of it either. In a way it isn't really anybody's fault, although a salesman should take enough interest in his job to find out the full story behind his wares. The manufacturer would go broke if he had to buy all the advertising space necessary to list every option available. The average salesman rarely takes the time to read *all* of the service sheets, special pamphlets and other written material among which the more obscure options are listed. In some cases the dealer or front office doesn't even bother to distribute the information among the sales force, taking the view that what the buyer doesn't know about he isn't going to request and what isn't requested the dealer isn't going to have to stock. Now that *you* know, if you run on to such a set-up, don't argue — just shrug your shoulders and go elsewhere.

Actually this RPO business has been going on in a small way for some time — ever since Hudson came up with Twin

and Chrysler lines. A Plymouth could be had in almost any form from timid to frighteningly ferocious. A Chrysler could be bought, depending on pocketbook health, any way from sedate to sizzling, the latter of course through the 300 series which each year has laid legitimate claim to being the most powerful series-produced passenger car in the world. For '60 and '61 the Dart line rivals Chevrolet for power-train RPO's.

After a slow start Pontiac has latterly loomed as a power-train RPO leader too, with an absolutely awesome array of engine combinations, gearboxes and rear end gearing that almost takes a knowledge of geometrical progressions if one wants to list all the permutations. For a long time Ford lay quiet, probably smarting from the spanking they got for their unabashed participation in racing during the early '50s. Then last year they made the power-train RPO scene with a 360-horsepower boomer that stomped around among the drag strips as if it held an ownership certificate on the clocks. This year 375 horses live where 360 lived before.

Studebaker, also quiet for several years, though once in head-



long pursuit of the biggest stable of horses, has rejoined the listings with new power-packs, special brakes and such esoteric niceties as their new four-speed transmission. Larks, too, can be had in stages ranging from miserly to brutal. As far as that goes, there isn't a manufacturer in the standard size (i.e. behemoth) field that doesn't offer a series of power-train options that in rational mixtures shouldn't satisfy anyone, though admittedly some offer hotter versions than others, while still others are best in the economy race.

Even the compacts are in the race to see who can offer the longest list of power-train options, though on a smaller scale. You can get Corvairs from stark to opulent and with automatic ease through standard three-speed to all-synchro four-speed gearboxes and, as of this writing, in at least two engine options. By the end of the year, if the front office says okay, there may even be three engines, though this isn't a promise. Naturally there is the Pontiac Tempest with its two engines and two transmissions that could shortly turn into three. The four-barrel version can actually be had in four stages of tune, so actually the engine count is five. Olds F-85 and the Buick Special so far only have one engine apiece but they're yet young.

Then there's the Valiant and the Lancer. The Valiant is offered with one size engine but Lancer can be had with either the small or long-stroke slanted Six. Though actually not an

everything you can get in the way of a power-pack. This will limit you to four or five specific makes such as the previously mentioned ferocious Ford, the ram-tuned Dart, the hot Pontiac or Chevrolet and similar equipment. Other makes have power-packs and super-stocks but there are only a relative few really jet-hot ones. For most people, however, this sort of sizzle is unnecessary and expensive. These engines are bordering on the sports type, high revving with only moderate low rpm torque, and for the most part their huge power outputs can't be put to use on any but high-speed expressways without running the risk of expensive disagreements with the law. There are others that will give the low-speed acceleration at less expense and it is among these that most buyers after higher-than-average power will choose. Those who do most or all their driving in urban areas will probably be happier with the economy versions with their appetite for less exotic fuel and less of it since today's economy engines are as quick at the low end as the power-packs of just a few years ago. Stop-and-start urban driving is murder on mileage where the hot ones are concerned, as well as being tough on the engines and their state of tune.

The type of transmission too should be chosen with an eye to one's needs rather than glamor. The high-speed tourer or drag strip artist will naturally go for the four-speed close-ratio boxes or for one of the three- or four-speed automatics of the positive-gearing type such as dual-range Hydramatic. Those living in hilly country, mountains or in areas where roads are twisting might do well to consider one of these multiple-speed close-ratio boxes, either automatic or manual, too, due to their ability to provide just the right gearing for any one of a set of varying demands. Others in more built-up areas or flat country with straight roads can be quite satisfied with lesser equipment, fewer ratios being needed for such situations. Generally speaking the more ratios there are in a gearbox, the longer the engine will remain out of direct drive, i.e., a one-to-one ratio and therefore the most economical though less spirited range. For urban use the idea would be to get into this direct drive as soon as possible and remain in it as long as possible and here the two-speed automatic or wide-ratio three-speed manual box is best, though hopelessly outclassed for competition on the strip or stop-light grand prix. The weight of the car can be of some consideration here as well, the heavier car or heavier load (hauling house, boat or race-car trailers for instance) requiring more and closer ratios for smoothness and economy of operation. A light car, operated under conditions of light load, on the other hand, is easily pushed by the lighter-duty transmission.

From there we go to the rear end. Most manufacturers have picked the best rear end to go with the engine-transmission teams, and under normal circumstances they have picked well. Generally speaking, the highest powered engines and the close-ratio multi-speed boxes are teamed with the highest ratio (lowest numerical) rear-end gearing. The only time these should be argued with is when competition is considered or when the area of operation is either extraordinarily hilly or excessively flat. For competition or hill-climbing, naturally, the next lower ratio will probably be a rational choice and for flat-land operation such as Western deserts or Florida a higher ratio can be used with a payoff in terms of economy and top speed. However, generally speaking, the engineers have picked the transmission-engine-rear-end combination well for general use driving and even, in the case of the Chrysler products, for drag strip operation as well. For such abnormal operation as towing, a lower gear can usually come in handy, especially where a manual shift is used.

So it goes. The choice of make, model, color and trim is just the beginning for today's car-buyer if he has any regard for his wallet and personal satisfaction. Gone is the day when one was forced to give a little to get a little and when every car was a compromise of faults versus advantages and the choice made on a balance of these features. These days "you pays your money and you takes your choice," and if the choice is not satisfactory the fault is hardly that of the manufacturer. /MT

# RPO

## PERSONALITY OF A CAR

RPO in the strict sense of the word, there is a thing called the Hyper-Pak and it was shown last winter in Daytona what such an item could do. This is an after-purchase deal, though, and so doesn't qualify as a true RPO but it does exist and could conceivably make the list if there is enough demand evidenced by the buying public.

The little Ford, or rather, little Mercury, in the form of the Comet has a pair of engine options, one short and one long stroker and, naturally, the usual two transmission options to make it low man on the totem pole.

Naturally the choice of how all these options should be mixed up is strictly the customer's choice and we couldn't begin to attempt to advise. However, there are certain rational steps one should take before pinpointing any specific item on the RPO list or lists.

The first decision to make is the one concerning how much steam you want and how much you are willing to lay out for it in terms of reduced fuel mileage. Naturally if you are a week-end warrior who wants to run at the local drag strip you want

# ROAD TEST

## WILLYS JEEP WAGON

**C**OMPACT STATION WAGONS are nothing novel at Willys Motors, Inc. This company has been producing true compact wagons continuously since shortly after World War II. Until this year its Jeep station wagon was the shortest American wagon and the only one with a four-cylinder engine. It still holds the record as the least expensive domestic wagon.

MOTOR TREND's test wagon was a two-wheel-drive Jeep station wagon, which should logically be called the line's economy version. This wagon was formerly known as the Maverick Special, and although the term has been dropped, everything else about the vehicle is the same. The powerplant is a four-cylinder, F-head engine producing 75 hp at 4000 rpm and 114 lbs.-ft. of torque at 2000 rpm. The transmission is a column-mounted, three-speed shift with overdrive. This power train has a rear axle ratio of 4.89-to-1.

Many of the test results appear, and actually are, significantly different from other compact wagons. There is good reason for this. The Jeep station wagon cannot be compared in all aspects to the general compact station wagon class, although Willys' station wagon is certainly a compact. This wagon has to be evaluated two ways — by itself and as a compact wagon — because in general purpose and in overall design it is more closely related to a truck than it is to a passenger car.

Both acceleration and economy figures are a good example of how the evaluation and analysis of the Jeep station wagon can be presented in two distinctly different ways. First, if only the bare figures as shown in the test data box are considered, the Jeep will probably compare unfavorably with other compact wagons. Both figures can be readily explained by a glance at the rear axle ratio. This is higher numerically than any other standard rear axle ratio for any American station wagon. Even with the overdrive engaged it is still high numerically, 3.42-to-1.

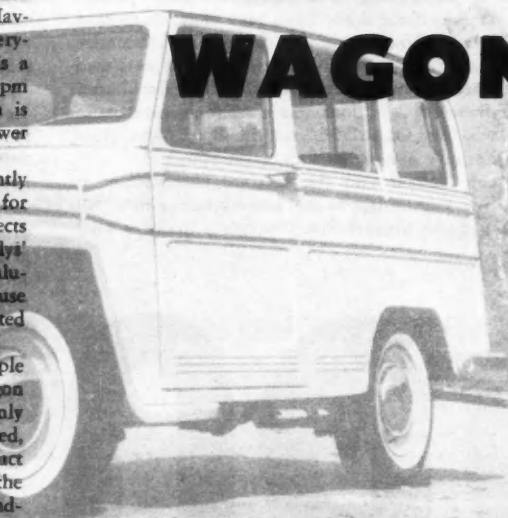
But the high ratio has its purpose. Basically the Jeep station wagon is designed to operate either on the highway or sub-standard back-country roads. In areas where low speeds are necessary, or on steep grades where pulling power is important, the Jeep station wagon will equal and even surpass many bigger and higher-powered engines with a normal axle ratio. When evaluated against this yardstick the Jeep's mileage and performance are understandable and are probably above average results.

Underneath, the running gear may surprise many persons — it will perhaps be something they have not seen since the early 1930s. The front axle is a solid I-beam and the suspension has semi-elliptical springs both front and rear.

The suspension, as might be expected, has some effect on the ride and handling characteristics. But before analyzing this, one more fact should be considered — the payload. With a gross vehicle weight of 4300 pounds, the Jeep station wagon can haul nearly three-quarters of a ton of cargo. This is a far greater figure than most standard-size station wagons. Moreover, the front axle has a capacity of 1600 pounds, and the rear, 3700 pounds, making overload springs not only practical but extremely useful for those who regularly haul heavy loads.

At highway speeds — for the Jeep station wagon this is slightly above 60 mph — the ride is firm but precise, with almost no twisting of the body. This is due in part to the suspension, which has very little sideways tolerance. Another normal result from the overall design, especially the high axle ratio, is engine noise. Silencing treatment, however, has been fairly effective, and the engine was judged only slightly more noisy than average for the compact class.

One other handling characteristic may be a little hard to understand. The steering, at six turns lock-to-lock, is one of the slowest on modern cars. Of course, this makes extremely poor maneuvering potential at parking-lot speeds where the road is



**SO CONVENTIONAL IT  
BRINGS BACK MEMORIES**



*Front passenger compartment of Jeep station wagon is austere, with plain materials; however, space is more generous than most other wagons.*

good. It does have an advantage in the back country, where the wheels may be frozen in ruts or against a rock.

What will impress most persons is the room available inside the passenger compartment. Again a mere look at the figures will be extremely misleading. Hiproom is about average for the compact class, but the transmission hump is low and narrow in front, and non-existent in back. Headroom is also average but does not include depressed space — so a usable figure would be well over 40 inches. Legroom seems to be below average, but this measurement doesn't take into consideration the fact that the bench seat height is 15.5 inches, nearly six inches more than some passenger cars.

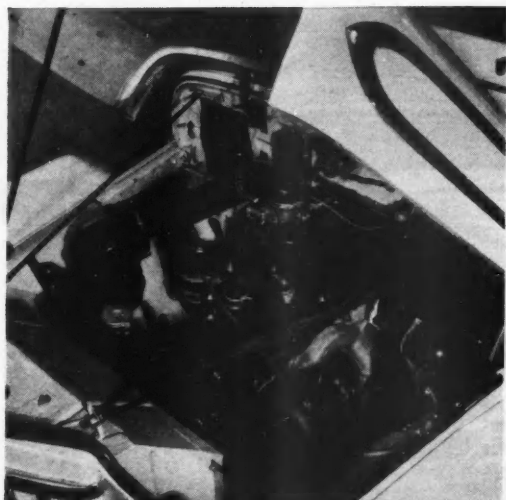
The front seat is divided into two sections, the right seat taking approximately one-third of the area. This seat can be folded full front, leaving a flat floor to make excellent back seat entry and exit. Both rear seats can be folded and turned forward to permit an exceptionally large cargo compartment. For maximum cargo capacity they can also be removed completely.

The cargo compartment at 100 cubic feet is also one of the largest capacities, even when standard-size station wagons are considered. This is a comparison against total space available, but when usable space is considered, the Jeep station wagon will double many other wagons, for practically every inch is usable when the front seats are removed.

The full range of Jeep station wagons is far too extensive to be discussed here. To say the least, they can be purchased in more varied forms than any other domestic wagon. Everything from four-wheel drive to a snow plow is available. Unlike other wagon lines, however, as options are selected the model number changes and the running gear plus a lot of performance and handling characteristics are changed.

To the average wagon enthusiast two options are most significant. One is an optional six-cylinder engine that produces 105 hp and 190 lbs.-ft. of torque. This would be a selection that would probably give considerably more power with little loss in economy. Another choice available is a 5.38-to-1 rear axle which would be most suitable for an individual who would use his car for extremely difficult back-country driving, heavy loads, or climbing sharp grades.

/MT



Four-cylinder F-head is an old design, but fuel economy is fair, and with the axle ratio of the test car, pulling power is better than most Sizzes.

**MT**

ROAD TEST  
1961 WILLYS



### Test Car

TEST CAR: 1961 Willys  
BODY TYPE: Jeep station wagon  
BASE PRICE: \$1995

### Maneuverability Factors

OVERALL LENGTH: 176.3 inches  
OVERALL WIDTH: 71.8 inches  
OVERALL HEIGHT: 70.5 inches  
WHEELBASE: 104.5 inches  
TREAD, FRONT/REAR: 57 and 57 inches  
TEST WEIGHT: 2993 lbs.  
WEIGHT DISTRIBUTION: 45.5 per cent on front wheels  
STEERING: 6 turns lock-to-lock  
TURNING CIRCLE: 42.6 feet curb-to-curb  
GROUND CLEARANCE: 7.4 inches

### Interior Room

SEATING CAPACITY: Six  
FRONT SEAT  
HEADROOM: 38.5 inches  
WIDTH: 56.8 inches  
LEGROOM: 42 inches

### Engine & Drive Train

TYPE: F-head 4-cylinder  
DISPLACEMENT: 134.2 cubic inches  
BORE & STROKE: 3.125 x 4.375  
COMPRESSION RATIO: 7.4-to-1  
CARBURETION: Single-barrel  
HORSEPOWER: 75 @ 4000 rpm  
TORQUE: 114 @ 2000 rpm  
TRANSMISSION: 3-speed manual with overdrive  
REAR AXLE RATIO: 4.89-to-1

### Performance

GAS MILEAGE: 16 to 20 miles per gallon  
ACCELERATION: 0-30 mph in 7.2 seconds, 0-45 mph in 14 seconds and 0-60 mph in 26.6 seconds  
SPEEDOMETER ERROR: Indicated 30, 45 and 60 mph are actual 28.5, 42.5 and 58 mph respectively  
ODOMETER ERROR: Indicated 100 miles is actual 98.5 miles  
WEIGHT-POWER RATIO: 39.9 lbs. per horsepower  
HORSEPOWER PER CUBIC INCH: .566



# SEARCH FOR STYLISTS

Here are some sample entries in  
the Motor Trend Design Competition

**L**AST MONTH'S ISSUE of MOTOR TREND announced a new contest that will award full scholarships in automotive styling to four MT readers. Designed to discover and train talented young people in this challenging field, this unique design competition will be judged upon the ability of the entrants to mold an original automotive package around one prescribed chassis.

Shown on these pages are sample designs. They are *not* entries in the competition but are examples of the type of cars that can be created within the limitations of the rules. They are the work of two students of the Art Center School, co-sponsor of the competition with MOTOR TREND and the institution which is offering the four scholarships to the winners. As shown in these sketches by Wayne Kady and Leo Pruneau, the entrant may style either a compact sedan, sports car or a wagon-bus. The physical dimensions and method of presentation are explained in full in the official entry kit, which must be obtained from the Art Center School before any contest entry is submitted. There is still time to send for the kit but interested readers must act immediately. All finished contest entries must be submitted by March 31, 1961. Winners will be announced in the July issue of MOTOR TREND.

Any MOTOR TREND reader in the general age bracket of 18 to 30 is eligible to enter if he or she has graduated in good standing from high school and is prepared to accept and use the scholarship beginning the semester following the close of the competition (Summer, 1961). All other contest rules are covered in the entry kit, but one point that must be stressed now is the rule that all final entries must be in sketch form. Last month's MT erroneously stated that entrants would be able to make models of their cars if they so preferred.

To show the great interest the automotive industry has in this competition, the five top U.S. car stylists have volunteered to serve as final judges. Edmund Anderson of American Motors, Virgil Exner of the Chrysler Corporation, Randall Faurot of Studebaker-Packard, William Mitchell of General Motors and George Walker of the Ford Motor Company will take time out from their duties as Directors of their firm's styling departments to pick the type of young talent that they would like to see in their field.

The four winners will receive scholarships leading to a degree at Art Center School of Los Angeles, recognized by the industry as the pioneer and leader in design education. Its graduates are in constant demand.

For those readers who feel they have a talent in automotive styling, this is a unique opportunity. Send immediately for an entry kit to: MOTOR TREND DESIGN COMPETITION, c/o Art Center School, 5353 West Third Street, Los Angeles 5, California.

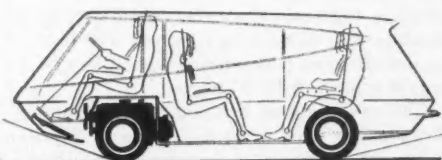
*This crisp-line sports car is one Art Center School student's conception of the type of package that can be molded around the specified chassis of the Contest.*



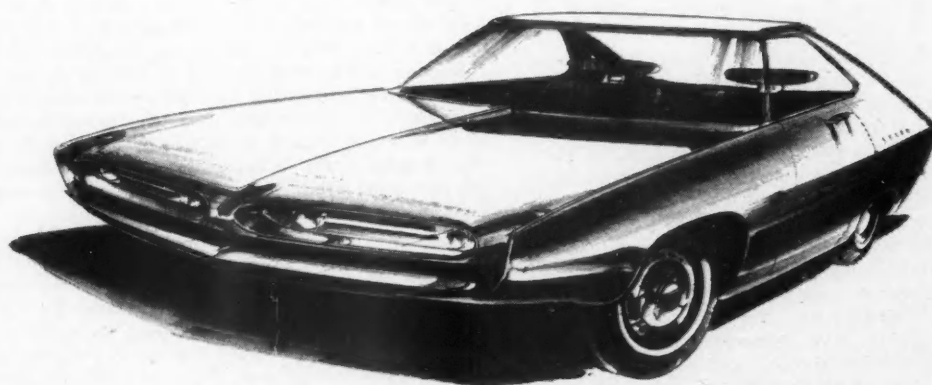




Here is a compact with room for six. The exact use of space allotments is shown in the cross-section above. None of these sketches is an entry in the Contest. All are samples done by present students of the School.



Entrants in the Design Competition may choose to make their design a wagon-bus. Full details for this chassis are given in the official entry kit.



This two-seater sports car is another design possibility for work by fledgling stylists. There is still time to enter the Competition.



**W**HEN IT COMES to variety, Fiat has it. The imported car shopper can take his pick from a range that starts with some petite little sedans and coupes, graduating upward through family-economy sedans, sports roadsters and semi-luxury sedans. Consequently, no one model is really representative of the marque, except that all are backed by Fiat's professionally operated service and parts organization and manufactured with the firm's international reputation for quality.

Two of the more popular Fiats in the upper middle of the line are the 1100 and 1200, so named because those figures approximate the cubic centimeter displacement of their respective engines. Although the cars have certain basic similarities, there are inherent differences. To determine exactly how they differ, where they coincide, and evaluate the relative worth of the two, **MOTOR TREND** picked one of each, rolling up test miles under as many and varied conditions as possible.

Both are essentially economy sedans, of a size class that no domestic manufacturer has yet invaded, although the prices compare with the bases of some of the compacts. As might be expected from engines only about one-fourth the displacement of say, a Chevrolet V-8, acceleration and top speed are hardly dazzling. Yet, acceleration compares very favorably with domestic compacts (excluding the new small V-8's) and fuel economy is in that happy high-20 league.

Taking the engines comparatively, the surprise is how similar they are. The 1200 is basically a bored-out version of the 1100. It has just a shade more compression but little other difference. Now that the carburetor has been standardized on both cars (dual-throat Weber), it is impossible to tell one engine from the other by simply opening the hood. What appears is a simple, straightforward, in-line Four with its accessories arranged for ease of service.

The difference in the engines is eight cubic inches and a vital eight horsepower, the extra naturally going to the 1200. This gives the 1200 a more favorable power-to-weight ratio in spite of its approximately 75 additional pounds. These factors show quickly on the first hill where the 1100 bogs down quicker, requiring a fast change to third gear and, if the grade increases, a switch to second. Test findings on hill abilities were borne out by factory figures on maximum climbable gradients. According to Fiat engineers the steepest hill that can be tackled successfully in an 1100 in fourth gear is 5.5 per cent, whereas a 1200 will pull 6.5 per cent. Third gear in an 1100 is good for 10 per cent; in a 1200, 12 per cent. And so it goes in the uphill department.

Getting back to the flatland, acceleration figures show a relation similar to climbing ability, although it is not as noticeable to the casual driver. If the foot is applied rather heavily to the accelerator through the gears, both cars move out well, more than rapidly enough to stay ahead of traffic, although the 1200 will automatically win any given drag race with the 1100. Both cars were equipped with the standard 4.3-to-1 rear axle and there are no options that could conceivably equalize the acceleration potential. In fact, to play with a well chosen factory ratio in this class of car is pointless.

During hard acceleration, engines in both cars began to sound as though they were working hard, and there was some question as to whether the cars were being over-revved. However, red dots on the ribbon-type speedo indicate redlines for the first three gears. It is of interest that they are identical for both cars and check out at 22, 37 and 56 mph. The factory-rated top speeds vary slightly, with the 1100 listed at 81 and the 1200 at 87 mph.

Under normal driving conditions it was almost impossible to come up with any significant variations in fuel economy. The two cars are so close that any difference in gas mileage will depend upon driving habits.

Ride was judged to be on the firm side, not exactly a bone-

testing two of the most  
popular sedans from  
this diverse Italian line

# FIAT 1100 AND 1200

rattler but not terribly soft. The Fiat's ride is a product of its suspension which makes the car handle well, which is really of primary importance. In this instance it is possible to speak of the two cars as one because they are identical twins under the unitized skin. There is nothing radical about suspension. At the front there are the usual A-arms, coil springs, tubular shocks and stabilizer bar; at the rear a rigid axle, semi-elliptic leaf springs, tubular shocks and another stabilizer bar. Taken as an entity they enable the car to corner quite well at higher than normal speeds. There is good stability through dips and high-speed control remained excellent while driving some back roads that were filled with ruts and reverse cambered curves.

Steering is medium light, that is, it's easy enough once the car is moving but twisting the wheels while stopped to squeeze in or out of a tight parking place is a chore. The only consolation is that it is quick enough so not many wheel turns are ever required. Traffic maneuverability was considered good for this size of car. Quick lane changes were possible with a minimum of fuss and virtually no arm flailing.

With nearly all the contributing factors already mentioned, there arises the question of the Fiat's suitability for a lengthy road trip. This is not easy to evaluate because there are so many factors that become highly subjective. For example, a motorist accustomed to barreling over the nation's interstate freeways in an air-conditioned V-8 would probably look coolly at the prospect of the same trip in a 1200. The fact remains that there is nothing impractical about the idea. A cruising speed of 65-70 mph is about the highest commensurate with long term reliability. It was felt that noise level at cruising

*With eight extra horsepower, the 1200 had a clear margin of superiority over its lower-priced running mate in passing and climbing ability. Yet, both Fiat test cars showed similar economy figures, ranging up to 29 mpg.*

## FULL RANGE ROAD TEST







A DESIRABLE FEATURE OF BOTH TEST CARS WAS RECLINING SEATS; INTERIOR OF 1200 WAS FINISHED MORE LUXURIOUSLY.



Both Fiats had comfortable driving positions for cars of their size. The 1100 had rear-hinged front doors.

speeds was on the high side but comparable to other cars in the class. And when the trip is through there is always the satisfaction of comparing gasoline bills with the V-8 owner.

Naturally, there is a limited amount of luggage space. However, both the 1100 and 1200 offer a desirable interior feature that is found on few imports at this price and on very few U.S. cars at any price — reclining seats. There isn't quite enough room for them to fold flush into a bed but they can make a lengthy auto journey considerably more pleasant, allowing a passenger to nap comfortably and the driver to alter positions.

Fiat brakes deserve a special mention. They perform in the manner that good brakes should — without fade. The secret is in the size of the finned aluminum drums. About 10 inches in diameter by two inches wide, they provide a healthy excess margin of lining area for stopping, even under severe operating conditions.

Obviously the two sedans have bodies of considerably different design. The 1200, as the more recent of the two, gets the best of it all around. A somewhat literal translation of its *Gran Luce* designation to "big windows" gives an indication of one of the 1200's advantages. Visibility is excellent; large, deep windows and slim pillars minimize blind spots. It must be added that the 1100 does not have bad visibility — just not as good as its more expensive kin.

A feature common to both bodies is the bumper treatment. Moderately strong (in relation to domestic products) they carry 1½-inch-thick rubber pads on the bumper guards. A simple idea, but it should go a long way to reducing petty damage from minor parking taps.

On only one count was the 1100 judged truly inferior to the 1200 — the front-opening doors for driver and passenger. These have disadvantages mostly related to safety and do not require a detailed

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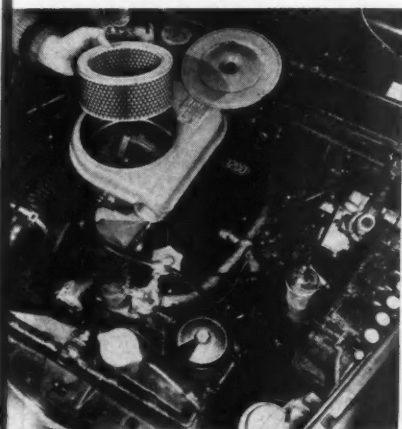


explanation. There are certainly no apparent advantages; it just seems to be the way Fiat did it.

As for interiors, the differences are subtle. The interiors appear to be almost the same but it is actually a case of giving the 1200 purchaser a little more throughout for his extra dollars. Seats in the 1200 are better padded and were found to be definitely more comfortable. The way in which the border pleat is rolled on the 1200, following the perimeter of the seat and backrest permits better support. Also, the choice of plastic covering seemed to be of better quality in the 1200. However, there is no skimping on armrests (four), ashtrays (three), or courtesy lights (three), from the 1200 to 1100. And both have spring-loaded grab straps that move out of the way when not in use by rear seat passengers.

The rear seat arrangement utilizes a couple of ingenious ideas. One is an option: The backrest folds forward forming a single flat platform through the trunk and greatly increasing luggage capacity. The second idea concerns the problem facing every short-wheelbase sedan: How do adults fit in the rear seat? The answer is, quite well, considering the available space. With the front seat at its rear adjustment (the worst condition) there is adequate, if not ample, kneeroom for a medium-sized adult. There is, however, some difficulty in entering gracefully through the restricted opening between the front and rear seats. The kneeroom is accomplished by recessing the backs of the front seat backrests. Stretched across the recesses are storage nets. Rear seat headroom is only fair, certainly not enough to permit wearing a hat.

The dash layout is identical on both cars. There are features to please gadget lovers including jeweled button indicator lights for high beam and turn signal which may be rotated to control their in-



A two-barrel Weber carburetor is now used on both 1100 and 1200 engines, making them identical in appearance.

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tensity as they shine into the driver's face. Another light, in the hooded speedo cluster, indicates when the parking lights are on; there is a fuel reserve light and a gas gauge; an oil pressure light but no pressure gauge; and a water temperature gauge. Businesslike toggle switches are unmarked but not really confusing. The base of the dash is padded; recessed below it is a row of control knobs — choke, throttle, heater, fresh air and a rubber pressure button for the windshield washer. A parcel shelf runs the length of the dash and its leading edge is thickly padded. The glove compartment is small and, in the case of the 1200, it was very difficult to open. This was the only instance of poor fit or maladjustment found on either car.

Quality level of finish and detailing throughout both cars was considered to be extremely high with the best appearance, strictly by virtue of richer materials, being in the 1200.

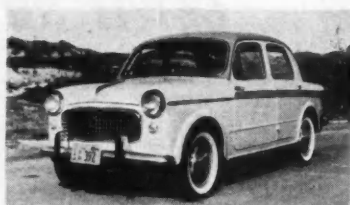
Seating position behind the wheel was considered good with sufficient seat adjustment possible to accommodate varying sizes of drivers. The circular horn ring, a deluxe feature not included on the 1100, interfered with vision to the speedo. The clutch throw was found to be unusually short with engagement firm and positive. Combined with light pedal pressure, this type of clutch action is an aid to traffic driving. Of similarly short throw is the column shift lever. Shifting on both cars tended to be stiff which may be explained partly by the relatively low mileage on the pair. While the ratios seemed to be well spaced, it was felt that a synchromesh first gear would be a great aid for traffic driving. Now that a number of less expensive cars have incorporated all-synchro transmissions, there seems little reason for not using it.

Finally, the Fiat was found to have an efficient heater-defroster and a windshield wiper that gave good coverage. It may seem odd to point out these commonly accepted items, but too often they are neglected on the less expensive imports.

In general, it was felt that the 1200 is a slightly better buy, despite its steeper price tag. However, if the over-\$200 differential is important to the purchaser there is no reason to hesitate at selecting the 1100. It is all a matter of paying a little more for some niceties that are not necessities.

/MT

next month  
**MOTOR TREND'S**  
special import issue  
gives the story  
on 95 foreign cars



## FIAT 1100

### test car

**TEST CAR:** Fiat 1100 Deluxe  
**BODY TYPE:** 4-door sedan  
**BASE PRICE:** \$1782 (East Coast p.o.e.)

### maneuverability factors

**OVERALL LENGTH:** 156.0 inches  
**OVERALL WIDTH:** 57.4 inches  
**OVERALL HEIGHT:** 58.7 inches  
**WHEELBASE:** 92.1 inches  
**TREAD, FRONT/REAR:** 48.6 and 47.9 inches  
**CURB WEIGHT:** 1951 lbs.  
**STEERING:** 3.2 turns lock-to-lock  
**TURNING CIRCLE:** 34.5 feet curb-to-curb  
**GROUND CLEARANCE:** 5.1 inches

### interior room

**SEATING CAPACITY:** 5  
**FRONT SEAT**  
**HEADROOM:** 35 inches  
**WIDTH:** 46.5 inches  
**LEGROOM:** 44 inches  
**TRUNK CAPACITY:** 11 cubic feet

### engine & drive train

**TYPE:** 4-cyl. ohv  
**DISPLACEMENT:** 66.5 cubic inches  
**BORE & STROKE:** 2.68 x 2.95  
**COMPRESSION RATIO:** 7.85-to-1  
**CARBURETION:** Single 2-barrel  
**HORSEPOWER:** 55 @ 4800 rpm  
**TORQUE:** N.A. @ rpm  
**TRANSMISSION:** 4-speed manual control; synchro on top 3 gears  
**REAR AXLE RATIO:** 4.3

### performance

**GAS MILEAGE:** 24 to 29 miles per gallon  
**ACCELERATION:** 0-30 mph in 6.3 seconds, 0-45 mph in 12.3 seconds and 0-60 mph in 22.7 seconds  
**SPEEDOMETER ERROR:** Indicated 30, 45 and 60 mph are actual 30, 43 and 56 mph respectively  
**ODOMETER ERROR:** Indicated 100 miles is actual 95  
**WEIGHT-POWER RATIO:** 35.5 lbs. per horsepower  
**HORSEPOWER PER CUBIC INCH:** .827



## FIAT 1200

### test car

**TEST CAR:** Fiat 1200  
**BODY TYPE:** 4-door sedan  
**BASE PRICE:** \$1998 (East Coast p.o.e.)

### maneuverability factors

**OVERALL LENGTH:** 156 inches  
**OVERALL WIDTH:** 57.4 inches  
**OVERALL HEIGHT:** 57.8 inches  
**WHEELBASE:** 92.1 inches  
**TREAD, FRONT/REAR:** 48.6 and 47.9 inches  
**CURB WEIGHT:** 2072 lbs.  
**STEERING:** 3.2 turns lock-to-lock  
**TURNING CIRCLE:** 34.5 feet curb-to-curb  
**GROUND CLEARANCE:** 5.1 inches

### interior room

**SEATING CAPACITY:** 5  
**FRONT SEAT**  
**HEADROOM:** 35 inches  
**WIDTH:** 46.5 inches  
**LEGROOM:** 44 inches  
**TRUNK CAPACITY:** 11 cubic feet

### engine & drive train

**TYPE:** 4-cyl. ohv  
**DISPLACEMENT:** 74.5 cubic inches  
**BORE & STROKE:** 2.83 x 2.95  
**COMPRESSION RATIO:** 8.25-to-1  
**CARBURETION:** Single 2-barrel  
**HORSEPOWER:** 63 @ 5300 rpm  
**TORQUE:** 68 lbs.-ft. @ 4000 rpm  
**TRANSMISSION:** 4-speed manual control; synchro on top 3 gears  
**REAR AXLE RATIO:** 4.3

### performance

**GAS MILEAGE:** 23 to 29 miles per gallon  
**ACCELERATION:** 0-30 mph in 5.6 seconds, 0-45 mph in 10.4 seconds and 0-60 mph in 20.5 seconds  
**SPEEDOMETER ERROR:** Indicated 30, 45 and 60 mph are actual 30, 44 and 56 mph respectively  
**ODOMETER ERROR:** Indicated 100 miles is actual 98 miles  
**WEIGHT-POWER RATIO:** 31.9 lbs. per horsepower  
**HORSEPOWER PER CUBIC INCH:** .845

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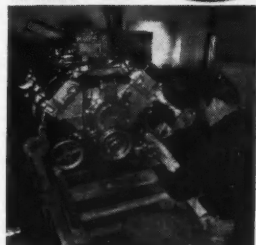
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## DRIVER'S REPORT



# CHEVROLET V-8 WITH CRUISE CONTROL

MOTOR TREND TESTS PROVE THAT THE CRUISE CONTROL HAS REAL ADVANTAGES IN COMFORT AND ECONOMY FOR HIGHWAY DRIVING.

**A**N ACCESSORY THAT AIDS in the performance of multiple functions including safety, economy and driver comfort would be an intriguing package for any motorist. It was such a thought that led to an appraisal of Cruise Control, an accessory that does just those things in varying degrees. It almost sounds like a miracle gadget but it's no gadget and miracles are not what are claimed.

What it does is quite simple. A single dash control allows the driver to set any speed up to 85 mph and hold it without effort, or have a constant reminder while maintaining the speed with normal accelerator pressure. The driver accelerates to desired speed and turns the control knob to the left until a firm resistance is felt on the accelerator pedal. This is the speed reminder feature best applied in city traffic where it is a cinch to end those "inadvertent" speeding citations. An added push on the accelerator allows the driver to override the unit and permits full acceleration at any time.

Out on the highway it works in exactly the same way with the important addition of temporarily relieving the driver of part of his job. After the speed is set and the accelerator resistance is felt, a push of the button in the center of the knob locks Cruise Control on. Now it is possible to remove one's foot from the accelerator and the car will hold the selected speed, automatically compensating for moderate up-

and down-grades. The override feature still applies for passing and the unit remains locked on until deliberately turned off. When it becomes necessary to slow down there are two possibilities: The control knob may be backed off to the left until the desired speed is reached; or the driver can take over with a light tap on the brake pedal, unlocking the unit.

MOTOR TREND's Cruise Control was installed on a new Chevrolet Impala powered by the 283-cubic-inch, 230-hp V-8. In this instance it was possible to apply a two-birds-with-one-stone testing



*A small button-dial by the instrument cluster allows the driver to pick his speed and lock it on for handy "no-foot" long-distance driving.*

technique, evaluating both the car and its featured accessory. Because two '61 Impalas were tested in the January issue, this was not intended to be a full-scale Chevy road test. Rather it provided supplementary information on the car's performance with a different powerplant. (Of the Impala V-8's tested in January, one had a 348-cubic-inch, 250-hp engine; the other a 283-cubic-inch, 170-hp engine. Both had 3.08-to-1 rear axles. The current test car, a la Cruise Control, got its added horses from one additional point of compression and a four-barrel carburetor instead of the dual throat. Also, it had the 3.36-to-1 rear axle which should have helped acceleration and hindered fuel economy.

A quick rundown on how the car performed is puzzling at first. Despite the extra horses and better axle ratio (for acceleration) it was only .5-second faster than the 170-hp Chevy to 30 mph. In fact, it was .6 slower to 45 mph and .4 slower to 60. How come? The 230-horse Impala, as a four-door hardtop, is marginally heavier than the two-door tested earlier but not enough to make much difference. The answer lies in the fact the 230-horse machine was equipped with Turboglide. The earlier test was run with Powerglide which has more snap. At that, the Turboglide

which materially improved acceleration times. The rear axle ratio difference is



almost meaningless in acceleration because torque converters tend to choose their most efficient final drive ratio and cancel out any differences at moderate engine rpm.

Truer to form are the fuel economy figures. Fractionally worse than the 170-hp car, they range just over two mpg better than those of the 348-cubic-inch engine. As far as the car's general handling and ride characteristics are concerned, they were comprehensively described in the January test.

In checking the economy feature of Cruise Control it was possible to record a noticeable gain in fuel economy through its use. Two high-speed round trips through California's San Joaquin Valley were made, both along a section of divided freeway, relatively straight and level with periodic slowdowns for construction and cross traffic. The first trip was made with manual throttle controls, maintaining a 60 mph average with spurts for passing when necessary. Then the Cruise Control run was made with the speedo pegged at an indicated 65 mph (true 63). It was surprising how few times it was necessary to unlock the Cruise Control despite moderately heavy traffic. And it was gratifying to see a 1.7-mpg decrease in fuel consumption even though the average speed for the two trips was identical.

Driver fatigue is difficult to pin down, but it was felt that because Cruise Control did allow more relaxation, fatigue was lessened. Using the unit under such conditions allows the driver to shift positions at will, thereby breaking the monotony of the trip.

On moderate up- and downgrades the unit will hold speeds within plus or minus two mph, which was considered quite effective. The only place it cannot work is on a downhill so steep that gravity takes over and the car accelerates in spite of a closed throttle.

A note of caution that comes to mind is the use of the device on long stretches at night. The natural tendency of a sleepy driver is to relax his throttle pressure as he dozes, slowing. A driver who falls asleep while using Cruise Control would leave the road at his pre-set speed.

Driving through city traffic was judged to be safer while using the speed minder phase of the unit. Once set for the speed limit, it was no longer necessary to look away from traffic and check the speedo. The resistance on the accelerator is heavy enough so that there can be no mistaking its feel. Yet, on take-off, maximum acceleration can be used without restraint because the back pressure doesn't start to come on until the car is very close to the selected speed.

How the Cruise Control works is not

quite as simple as what it does. First, it was found to be much superior in concept to some devices which purport to do a similar job. A good deal more than mechanically holding the throttle pedal in position is involved. Mounted on the engine is the control unit, the brains of the system, which consists of a servo-motor, a flyweight governor, governor spring, electro-magnetic coils and magnet assembly contact points. The governor is driven mechanically by a speedometer cable (the input cable) from the normal speedo take-off point at the transmission. (The car's speedo is then driven by a second cable from the control unit.) The input cable turns the governor, making it rise on its shaft as speed increases. But the governor is held down by a spring, the tension of which is adjusted each time the dash control is turned. In this way the position of the governor is balanced by the spring at whatever speed is selected.

As the governor busily rides up and down on its shaft, it moves a contact arm that rotates by means of an eccentric arm. This contact arm moves between the contact points of a magnet assembly and another contact point on the pintle (or pivot) assembly locking arm. Electrical contact between these points starts the servo-motor which is reversible. It rotates a screw which carries the magnet assembly. When the magnet assembly moves, it moves the locking arm which is connected to the accelerator linkage. As the car reaches a selected speed the points break contact because they are opposed by governor spring tension. This causes the accelerator pedal back pressure. Now suppose the car exceeds its speed setting on a downhill run. The opposite set of points makes contact, the motor reverses and the magnet assembly is moved in the opposite direction which raises the accelerator pedal until contact is again broken due to governor spring pressure.

Locking on the automatic speed control is simply a matter of activating an electromagnetic coil in the center of the magnet assembly. This locks the magnet assembly to the pintle assembly, allowing the points enough free play to make minor corrections for hills.

It all sounds complicated — and it is. The explanation is offered only as an indication that a good deal of engineering has gone into the unit. Home mechanics are reminded that they couldn't repair any malfunctions from this description because the device is sealed.

Cruise Control was developed and is manufactured by Perfect Circle, whose lengthy reputation for high-quality piston rings is a considerable endorsement in itself for any other product they choose to

## TEST DATA

**TEST CAR:** 1961 Chevrolet Impala

**BODY TYPE:** 4-door hardtop

**ENGINE TYPE:** ohv V-8

**DISPLACEMENT:** 283 cubic inches

**BORE & STROKE:** 3.875 x 3.00

**COMPRESSION RATIO:** 9.5-to-1

**CARBURETION:** Single 4-barrel

**HORSEPOWER:** 230 @ 4800 rpm

**TORQUE:** 300 lbs.-ft. @ 3000 rpm

**TRANSMISSION:** Turboglide automatic

**REAR AXLE RATIO:** 3.36

**GAS MILEAGE:**

Open road with manual throttle

control: 15.0 mpg

Open road with Cruise Control:

16.7 mpg

**ACCELERATION:** 0.30 mph in 4.1

seconds, 0-45 mph in 7.7

seconds, 0-60 mph in 12.6

seconds

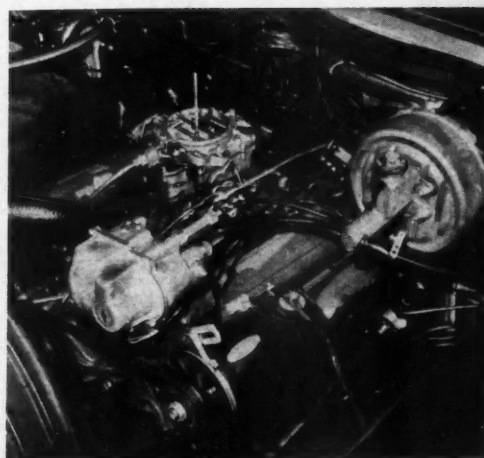
**SPEEDOMETER ERROR:** Indicated 30,

45 and 60 mph are actual 28,

43 and 58 mph respectively

**ODOMETER ERROR:** Indicated 100

miles is actual 96 miles



*The Cruise Control unit is shown, mounted on the engine of the test Chevrolet. Its rather complicated mechanism is sealed from tamperers.*

market. While the MOTOR TREND unit was on a Chevrolet, it is also available as a factory option on Cadillac, Chrysler, Imperial and Continental. Arrangements for dealer installation may be made for Ford, Plymouth or Dodge. /MT

## TESTING one of the most EFFECTIVE SPEED CONTROLS and DRIVER ASSISTS

# MOTOR TREND'S 1961 CAR SPECIFICATIONS

All figures listed are for four-door sedans. If that body type is not offered, data for four-door hardtops is listed. Obvious exceptions are such cars as the Thunderbird and Corvette. All specifications are the latest as announced by the manufacturers. Additions and corrections will be made each month in order that our readers may have the most complete and authoritative figures on Detroit's new cars. (Entries marked "NA" contain information not available at the time of publication.)

	LENGTH	WIDTH	HEIGHT	WHEELBASE	TREAD		TIRE SIZE	MINIMUM ROAD CLEARANCE	TURNING CIRCLE	SHIPPING WEIGHT	FRONT SEAT			REAR SEAT		
					FRONT	REAR					HEAD ROOM	LEG ROOM	HIP ROOM	HEAD ROOM	LEG ROOM	HIP ROOM
BUICK Le Sabre, Invicta Electra	213.2 219.2	78.0 78.0	56.3 57.0	123.0 126.0	62.0 62.0	61.0 61.0	7.60 x 15 8.00 x 15	5.5 5.7	44.0 45.7	4129 4333	34.5 34.3	44.8 44.8	63.3 63.6	34.1 34.5	41.4 44.0	63.2 63.2
BUICK Special	188.4	71.3	52.8	112.1	56.0	56.0	6.50 x 13	4.9	38.1	2610	33.9	44.6	58.6	33.7	37.8	58.2
CADILLAC 60 62 75	222.0 222.0 242.3	79.8 79.8 80.6	56.6 56.3 59.1	129.5 129.5 149.8	61.0 61.0 61.0	61.0 61.0 61.0	8.00 x 15 8.00 x 15 8.20 x 15	5.1 5.1 6.2	43.0 43.0 48.0	4770 4680 5390	34.4 34.4 36.3	46.0 46.0 44.2	63.3 63.3 65.5	34.1 34.1 34.8	44.5 44.5 NA	63.1 63.1 60.1
CHEVROLET	209.3	78.4	55.5	119.0	60.3	59.3	7.50 x 14	6.0	40.8	3500	34.5	45.0	63.5	34.0	42.0	63.5
CHEVROLET CORVAIR	180.0	67.0	51.5	108.0	54.0	54.0	6.50 x 13	6.0	39.0	2355	33.5	44.0	58.5	33.5	36.5	58.0
CHEVROLET CORVETTE	176.7	70.4	52.2	102.0	57.0	59.0	6.70 x 15	6.7	37.0	2905	37.0	46.4	59.6	- - -	- - -	- - -
CHRYSLER Newport, Windsor New Yorker 300-G	215.6 219.8 219.8	79.4 79.4 79.4	54.9 55.6 55.1	122.0 126.0 126.0	61.0 61.2 61.2	59.7 60.0 60.0	8.00 x 14 8.50 x 14 8.00 x 15	5.2 5.7 5.7	44.0 46.6 46.6	NA NA NA	37.6 37.6 38.1	45.1 45.3 45.6	63.8 63.8 - - -	38.1 38.1 38.1	42.4 42.4 35.4	62.8 62.8 - - -
COMET	194.8	70.4	54.5	114.0	55.0	54.5	6.00 x 13	5.9	39.9	2440	38.6	43.9	57.0	37.6	40.8	56.7
DODGE	212.5	78.7	54.9	122.0	61.5	60.2	8.00 x 14	5.3	43.9	3700	37.6	45.1	63.8	38.1	42.4	62.8
DODGE DART	209.4	78.7	54.8	118.0	61.5	60.2	7.50 x 14	5.1	42.3	3510	37.6	45.1	63.8	38.0	42.1	62.9
DODGE LANCER	188.8	72.3	53.3	106.5	56.0	55.5	6.50 x 13	5.4	37.9	2595	37.9	42.8	56.8	37.4	39.7	56.9
FORD	209.9	79.9	55.0	119.0	61.0	60.0	7.50 x 14	5.5	41.0	3683	38.2	45.3	62.1	37.6	43.3	63.5
FORD FALCON	181.2	70.3	54.5	109.5	55.0	54.5	6.00 x 13	5.9	38.3	2289	38.8	44.6	57.1	37.3	39.4	57.0
FORD THUNDERBIRD	205.0	75.9	52.5	113.0	61.0	60.0	8.00 x 14	5.2	40.2	3958	37.5	43.9	59.0	37.6	40.4	52.3
IMPERIAL	227.3	81.7	56.7	129.0	61.8	62.2	8.20 x 15	5.6	48.2	NA	38.9	46.9	61.0	38.3	42.9	60.2
LINCOLN CONTINENTAL	212.4	78.6	53.5	123.0	62.1	61.0	9.00 x 14	5.5	46.7	4771	38.6	44.0	59.7	38.2	40.0	60.7
MERCURY	214.6	79.9	55.0	120.0	61.0	60.0	7.50 x 14	5.7	41.6	3762	38.2	45.3	62.1	37.6	43.3	63.5
OLDS Dynamic 88, Super 88 98	212.0 218.0	77.2 77.2	55.8 56.6	123.0 126.0	61.0 61.0	61.0 61.0	8.00 x 14 8.50 x 14	5.6 5.8	43.0 43.8	4024 4208	34.5 35.2	44.4 44.1	63.3 63.6	34.4 34.4	41.7 41.7	63.3 63.2
OLDSMOBILE F-85	188.2	71.6	52.6	112.0	56.0	56.0	6.50 x 13	4.9	37.0	2566	34.0	44.0	58.6	33.9	37.8	58.2
PLYMOUTH	209.5	80.0	54.6	118.0	60.9	59.6	7.00 x 14	4.7	42.2	NA	33.3	54.3	63.8	33.5	42.1	62.9
PLYMOUTH VALIANT	183.7	70.4	53.3	106.5	56.0	55.5	6.50 x 13	5.4	37.1	2695	33.6	42.8	56.8	33.1	39.8	56.9
PONTIAC Catalina, Ventura Star Chief, Bonneville	210.0 217.0	78.2 78.2	55.9 55.9	119.0 123.0	62.5 62.5	62.5 62.5	8.00 x 14 8.00 x 14	6.0 6.0	46.0 46.6	3795 3895	38.8 38.8	45.1 44.9	63.2 63.2	37.9 37.9	40.6 40.9	63.2 63.0
PONTIAC TEMPEST	189.3	72.2	53.5	112.0	56.8	56.8	6.00 x 15	6.0	41.0	2800	38.3	44.1	58.6	37.1	37.8	58.2
RAMBLER AMBASSADOR	199.0	73.6	56.9	117.0	57.8	59.1	8.00 x 14	5.5	39.8	3430	36.0	43.0	59.8	34.5	40.0	60.1
RAMBLER AMERICAN Classic V-8 Classic 6	173.0 189.9 189.9	70.0 72.4 72.4	56.2 57.1 57.3	100.0 108.0 108.0	54.6 58.8 57.8	55.0 59.1 58.0	6.00 x 15 7.50 x 14 6.50 x 15	5.3 5.4 5.6	36.0 37.6 37.3	2544 3255 2933	35.0 36.0 36.0	44.0 43.0 43.0	58.0 59.8 59.8	33.0 34.5 34.5	37.5 40.0 40.0	45.3 60.1 60.1
STUDEBAKER HAWK	204.0	71.4	55.5	120.5	57.4	56.6	6.70 x 15	6.8	41.0	3207	34.5	44.0	59.5	33.7	37.0	58.0
STUDEBAKER LARK LARK Cruiser	175.0 179.0	71.4 71.4	56.5 56.5	108.5 113.0	57.4 57.4	56.6 56.6	6.50 x 15 6.50 x 15	6.1 6.1	37.5 39.0	2966 3000	35.2 35.2	43.5 43.5	59.5 59.5	34.7 34.7	40.0 44.0	59.0 59.5

## 1961 BODY & CHASSIS DIMENSIONS







## BIG CARS

TYPE	HORSEPOWER @ RPM	TORQUE @ RPM	DISPLACEMENT	BORE AND STROKE	COMPRESSION RATIOS	CARBURETION	AXLE RATIOS		
							AUTOMATIC	MANUAL	OPTIONAL
BUICK Le Sabre (standard)	V-8 250 @ 4400	384 @ 2400	364	4.13 x 3.40	10.25	1 2-bbl.	3.07	---	---
Le Sabre (optional)	V-8 235 @ 4400	375 @ 2400	364	4.13 x 3.40	9.0	1 2-bbl.	3.07	---	---
Le Sabre (optional)	V-8 300 @ 4400	405 @ 2800	364	4.13 x 3.40	10.25	1 4-bbl.	3.23	---	---
Invicta, Electra, Electra 225	V-8 325 @ 4400	445 @ 2800	401	4.19 x 3.64	10.25	1 4-bbl.	3.23	---	---
CADILLAC 60 & 62	V-8 325 @ 4800	430 @ 3100	390	4.00 x 3.875	10.5	1 4-bbl.	2.94	---	---
75	V-8 325 @ 4800	430 @ 3100	390	4.00 x 3.875	10.5	1 4-bbl.	3.36	---	3.77
CHEVROLET Six	6 135 @ 4000	217 @ 2000	235	3.56 x 3.94	8.25	1 1-bbl.	3.36	3.36	3.55, 3.70
170	V-8 170 @ 4200	275 @ 2200	283	3.87 x 3.00	8.5	1 2-bbl.	3.08, 3.36	3.36	3.70
230	V-8 230 @ 4800	300 @ 3000	283	3.87 x 3.00	9.5	1 4-bbl.	3.36	3.36	3.70
250	V-8 250 @ 4400	355 @ 2800	348	4.12 x 3.25	9.5	1 4-bbl.	3.08	3.36	3.08
280	V-8 280 @ 4800	355 @ 3200	348	4.12 x 3.25	9.5	3 2-bbl.	3.08	3.36	---
305	V-8 305 @ 5200	355 @ 3400	348	4.12 x 3.25	9.5	1 4-bbl.	3.55	3.36	---
340	V-8 340 @ 5800	362 @ 3600	348	4.12 x 3.25	11.25	1 4-bbl.	---	3.70	---
350	V-8 350 @ 6000	364 @ 3600	348	4.12 x 3.25	11.25	3 2-bbl.	---	3.70	---
CHEVROLET CORVETTE	V-8 230 @ 4800	300 @ 3000	283	3.87 x 3.00	9.5	1 4-bbl.	3.55	3.36	3.70, 4.11, 4.56
245	V-8 245 @ 5000	300 @ 3800	283	3.87 x 3.00	9.5	2 4-bbl.	3.55	3.36	3.70, 4.11, 4.56
270	V-8 270 @ 6000	285 @ 4200	283	3.87 x 3.00	9.5	2 4-bbl.	---	3.36	3.70, 4.11, 4.56
275	V-8 275 @ 5200	305 @ 4400	283	3.87 x 3.00	11.0	F.I.	---	3.36	3.70, 4.11, 4.56
315	V-8 315 @ 6200	295 @ 5100	283	3.87 x 3.00	11.0	F.I.	---	3.36	3.70, 4.11, 4.56
CHRYSLER Newport	V-8 265 @ 4400	380 @ 2400	361	4.12 x 3.38	9.0	1 2-bbl.	2.93	3.58	---
Windsor	V-8 305 @ 4600	410 @ 2400	383	4.25 x 3.38	10.0	1 2-bbl.	2.93	3.58	---
New Yorker	V-8 350 @ 4600	470 @ 2800	413	4.18 x 3.75	10.1	1 4-bbl.	2.93	---	---
300-G	V-8 375 @ 5000	495 @ 2800	413	4.18 x 3.75	10.1	2 4-bbl.	3.23	3.23	---
DODGE Pelara V-8	V-8 265 @ 4400	380 @ 2400	361	4.12 x 3.38	9.0	1 2-bbl.	2.93	3.23	3.23
D-500	V-8 325 @ 4600	425 @ 2800	383	4.25 x 3.38	10.0	1 4-bbl.	3.23	3.23	---
D-500 w/Ram Induction	V-8 330 @ 4800	460 @ 2800	383	4.25 x 3.38	10.0	2 4-bbl.	3.23	3.23	---
DODGE DART Six	6 145 @ 4000	215 @ 2800	225	3.40 x 4.125	8.2	1 1-bbl.	3.31	3.54	3.58
V-8	V-8 230 @ 4400	340 @ 2400	318	3.91 x 3.31	9.0	1 2-bbl.	3.31	3.58	3.31
V-8 Power Pack	V-8 260 @ 4400	345 @ 2800	318	3.91 x 3.31	9.0	1 4-bbl.	3.31	---	---
D-500	V-8 305 @ 4800	395 @ 3000	361	4.12 x 3.38	9.0	1 4-bbl.	3.31	NA	---
Police Special	V-8 325 @ 4600	425 @ 2800	383	4.25 x 3.38	10.0	1 4-bbl.	3.23	3.23	---
D-500 w/Ram Induction	V-8 330 @ 4800	460 @ 2800	383	4.25 x 3.38	10.0	2 4-bbl.	3.23	3.23	---
FORD Six	6 135 @ 4000	200 @ 2000	223	3.62 x 3.60	8.4	1 1-bbl.	3.56	3.56	3.89
292	V-8 175 @ 4200	279 @ 2200	292	3.75 x 3.30	8.8	1 2-bbl.	3.00	3.56	3.89
352	V-8 220 @ 4400	335 @ 2400	352	4.00 x 3.50	8.9	1 2-bbl.	3.00	3.56	3.56
390 Special	V-8 300 @ 4600	427 @ 2800	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	3.56	3.56
390 Police Special	V-8 330 @ 5000	427 @ 3200	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	3.56	3.89
390 Super	V-8 375 @ 6000	430 @ 3400	390	4.05 x 3.78	10.6	1 4-bbl.	NA	3.56	3.89
FORD THUNDERBIRD	V-8 300 @ 4600	427 @ 2800	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	NA	---
IMPERIAL	V-8 350 @ 4600	470 @ 2800	413	4.18 x 3.75	10.1	1 4-bbl.	2.93	---	---
LINCOLN CONTINENTAL	V-8 300 @ 4100	465 @ 2000	430	4.30 x 3.70	10.0	1 2-bbl.	2.89	---	---
MERCURY Six	6 135 @ 4000	200 @ 2000	223	3.62 x 3.60	8.4	1 1-bbl.	3.56	3.56	3.89
292	V-8 175 @ 4200	279 @ 2200	292	3.75 x 3.30	8.8	1 2-bbl.	3.00	3.56	3.89
352	V-8 220 @ 4400	335 @ 2400	352	4.00 x 3.50	8.9	1 2-bbl.	3.00	3.56	3.89
390	V-8 300 @ 4600	427 @ 2800	390	4.05 x 3.78	9.6	1 4-bbl.	3.00	3.56	3.89
OLDSMOBILE Dynamic 88	V-8 250 @ 4400	405 @ 2400	394	4.13 x 3.69	8.8	1 2-bbl.	2.87	3.42	---
Super 88, 98	V-8 325 @ 4600	435 @ 2800	394	4.13 x 3.69	10.0	1 4-bbl.	3.08, 3.23	3.42	---
PLYMOUTH Six	6 145 @ 4000	215 @ 2800	225	3.40 x 4.125	8.2	1 1-bbl.	3.31	3.54	---
Fury	V-8 230 @ 4400	340 @ 2400	318	3.91 x 3.31	9.0	1 2-bbl.	2.93	3.58	---
Super Fury	V-8 360 @ 4400	345 @ 2800	318	3.91 x 3.31	9.0	1 4-bbl.	2.93	3.58	---
Golden Commando	V-8 305 @ 4800	395 @ 3300	361	4.12 x 3.38	9.0	1 4-bbl.	3.31	3.31	---
Sonoramic Commando	V-8 330 @ 4800	460 @ 2800	383	4.25 x 3.38	10.0	2 4-bbl.	3.31	3.31	---
PONTIAC Catalina, Ventura, Star Chief	V-8 215 @ 3600	390 @ 2000	389	4.06 x 3.75	8.6	1 2-bbl.	---	3.23	3.08, 3.42
Bonneville (optional other series)	V-8 235 @ 3600	402 @ 2000	389	4.06 x 3.75	8.6	1 4-bbl.	---	3.23	3.08, 3.42
Catalina, Ventura w/Hydrumatic	V-8 267 @ 4200	405 @ 2400	389	4.06 x 3.75	10.25	1 2-bbl.	2.69, 2.87	---	3.08, 2.56, 2.69
Catalina, Ventura w/Hydrumatic (opt)	V-8 287 @ 4400	417 @ 2400	389	4.06 x 3.75	10.25	1 4-bbl.	2.69, 2.87	---	2.56, 3.08, 2.96
Star Chief w/Hydrumatic	V-8 283 @ 4400	413 @ 2800	389	4.06 x 3.75	10.25	1 2-bbl.	2.87	---	2.69, 3.08
Bonneville w/Hydrumatic	V-8 303 @ 4600	425 @ 2800	389	4.06 x 3.75	10.25	1 4-bbl.	2.87	---	---
All series w/Hydrumatic (optional)	V-8 230 @ 4000	380 @ 2000	389	4.06 x 3.75	8.6	1 2-bbl.	2.56	---	---
All series (optional)	V-8 318 @ 4600	430 @ 3200	389	4.06 x 3.75	10.75	3 2-bbl.	2.69	3.23	2.56, 2.69, 3.08, 3.42
All series (optional)	V-8 333 @ 4800	425 @ 2800	389	4.06 x 3.75	10.75	1 4-bbl.	3.08	3.42	3.64
All series (optional)	V-8 348 @ 4800	430 @ 3200	389	4.06 x 3.75	10.75	3 2-bbl.	3.08	3.42	3.64
RAMBLER Ambassador	V-8 250 @ 4700	340 @ 2600	327	4.00 x 3.25	8.7	1 2-bbl.	2.87	3.54	3.15, 4.10
Ambassador Power Pack	V-8 270 @ 4700	360 @ 2600	327	4.00 x 3.25	9.7	1 4-bbl.	3.15	3.54	2.87, 4.10
STUDEBAKER Hawk V-8	V-8 210 @ 4500	300 @ 2800	289	3.60 x 3.60	8.8	1 2-bbl.	3.07	3.31	3.54
Hawk V-8 Power Pack	V-8 225 @ 4500	305 @ 3000	289	3.60 x 3.60	8.8	1 4-bbl.	3.07	3.31	3.54

## COMPACT CARS

BUICK SPECIAL	V-8 155 @ 4600	220 @ 2400	215	3.50 x 2.80	8.8	1 2-bbl.	3.08	3.36	---
CHEVROLET CORVAIR Turbo-Air	6 80 @ 4400	128 @ 2300	145	3.44 x 2.60	8.0	2 1-bbl.	3.27	3.27	3.55
Super Turbo-Air	6 98 @ 4600	132 @ 2800	145	3.44 x 2.60	8.0	2 1-bbl.	3.27	3.27	3.55
COMET 144	6 85 @ 4200	134 @ 2000	144	3.50 x 2.50	8.7	1 1-bbl.	3.50	3.50	---
170	6 101 @ 4400	156 @ 2400	170	3.50 x 2.94	8.7	1 1-bbl.	3.50	3.20	---
DODGE LANCER 170	6 101 @ 4400	155 @ 2400	170	3.40 x 3.125	8.2	1 1-bbl.	3.23	3.55	---
225	6 145 @ 4000	215 @ 2800	225	3.40 x 4.125	8.2	1 1-bbl.	3.23	3.55	---
FORD FALCON 144	6 85 @ 4200	134 @ 2000	144	3.50 x 2.50	8.7	1 1-bbl.	3.50	3.10	---
170	6 101 @ 4400	156 @ 2400	170	3.50 x 2.94	8.7	1 1-bbl.	3.50	3.20	---
OLDSMOBILE F-85	V-8 155 @ 4800	210 @ 3200	215	3.50 x 2.80	8.8	1 2-bbl.	3.23	3.07	---
PLYMOUTH VALIANT	6 101 @ 4400	155 @ 2400	170	3.40 x 3.125	8.2	1 1-bbl.	3.23	3.55	3.23, 3.91, 3.55
PONTIAC TEMPEST	4 110 @ 3800	190 @ 2000	194.5	4.06 x 3.75	8.6	1 1-bbl.	---	3.55	3.31, 3.73
Tempest w/Hydrumatic	4 130 @ 4400	196 @ 2200	194.5	4.06 x 3.75	8.6	1 1-bbl.	3.08	---	3.55
Tempest Premium Fuel	4 120 @ 3800	202 @ 2000	194.5	4.06 x 3.75	10.25	1 1-bbl.	---	3.31	3.55
Tempest Premium Fuel w/Hydrumatic	4 140 @ 4400	207 @ 2200	194.5	4.06 x 3.75	10.25	1 1-bbl.	3.08	---	3.55
Tempest w/4-bbl	4 155 @ 4800	215 @ 2800	194.5	4.06 x 3.75	10.25	1 4-bbl.	3.55	---	3.08, 3.73
Tempest V-8	V-8 155 @ 4600	220 @ 2400	215	3.50 x 2.80	8.8	1 2-bbl.	3.55	---	3.08, 3.73
RAMBLER AMERICAN Deluxe, Super	6 90 @ 3800	160 @ 1600	195	3.13 x 4.25	8.0	1 1-bbl.	3.31	3.31	3.78, 4.11
AMERICAN Custom	6 125 @ 4200	180 @ 1600	195	3.13 x 4.25	8.7	1 1-bbl.	2.87	3.31	3.78
CLASSIC Six	6 127 @ 4200	180 @ 1600	195	3.13 x 4.25	8.7	1 1-bbl.	3.31	3.78	4.11, 4.38
CLASSIC Six Power Pack	6 138 @ 4500	185 @ 1800	195	3.13 x 4.25	8.7	1 2-bbl.	3.31	3.78	4.11, 4.38
CLASSIC V-8	V-8 200 @ 4900	245 @ 2500	250	3.50 x 3.25	8.7	1 2-bbl.	3.15	4.10	3.55, 4.44
CLASSIC V-8 Power Pack	V-8 215 @ 4900	260 @ 2500	250	3.50 x 3.25	8.7	1 4-bbl.	3.15	4.10	3.55, 4.44
STUDEBAKER LARK Six	6 112 @ 4500	154 @ 2000	170	3.00 x 4.00	8.5	1 1-bbl.	3.73	3.73	3.54, 4.10, 4.56
LARK V-8	V-8 180 @ 4500	260 @ 2800	259	3.60 x 3.25	8.8	1 2-bbl.	3.07	3.07	3.31, 3.54
LARK V-8 Power Pack	V-8 195 @ 4500	265 @ 3000	259	3.60 x 3.25	8.8	1 4-bbl.	3.07	3.07	3.31, 3.54

# HOW TO READ THE

The true personality of any car can be found in the grey lines of statistics

**A FEW YEARS AGO** anyone who wanted to buy a low-priced American car had to choose among a Chevrolet, Ford, Plymouth or Rambler. A quick visit to the respective showrooms, a good look at the car inside and out, maybe a short demonstration ride — and then it was easy to narrow the choice to one.

What does the low-priced-class car buyer face today? A confusing array of choices among Ford, Chevrolet, Plymouth, Dart and Rambler — plus Corvair, Falcon, Valiant, Comet, Dodge Lancer, Mercury Meteor, Olds F-85, Buick Special, Pontiac Tempest and the Studebaker Lark! If a buyer waited to see and drive them all, it could be 1962 before he made his choice.

The editors of **MOTOR TREND** believe a valuable aid in making a choice is major specifications on all U.S. passenger cars, presented in **MOTOR TREND** each month, which are revised as new figures become available. These can undoubtedly help buyers to narrow their choice of models within a given price range by allowing them to compare directly important factors like turning circle, horsepower, cubic inches, length and width, seat width, weight, gear ratio, etc. But it is also realized that the meaning of some of these vital specifications is not thoroughly understood by the average car owner.

In order to remedy this and facilitate intelligent comparison, here are brief guides to the various specifications.

**ENGINE TYPE** — This merely refers to the number and layout of cylinders. The figures differentiate among the conventional V-8 layout and the in-line four- and six-cylinder arrangement. The Corvair six-cylinder "pancake," or opposed layout is not specially designated; but otherwise all engines are either in-line or V.

**HORSEPOWER** — "Power" refers to how fast an engine can do work. One horsepower is equivalent to lifting a weight of 550 pounds a distance of one foot (550 foot-pounds of work) in one second. The second figure in the column refers to the crankshaft speed in revolutions per minute (rpm) at which the maximum horsepower is developed. This is always relatively high because maximum power will naturally be delivered when the work done by each piston power stroke, measured in foot-pounds, is multiplied by the maximum number of strokes per second, or minute. This determines how quickly a car can travel down a drag strip, or climb a hill, or how fast it can pull the body through the wind. At rpm's above the "peak" the increased engine friction and decreased breathing ability cause the actual horsepower output to drop off.

No stock U.S. car will deliver its advertised horsepower to the flywheel on the road. This is because engines are tested at the factory without any power-absorbing accessories dragging them down. They're run without mufflers, air cleaners, fans, and with hand-adjusting spark advance, without generator charging or power steering or air-conditioning pumps — and to top it, the dynamometer horsepower readings are "corrected" to 60° F. air temperature and sea-level barometric pressure. Just the hot air under the hood of a car can whack four or five per cent off the engine output, as compared with the advertised figure. So these advertised power ratings should be used only for comparative purposes, and not as any indication of the true performance potential of the engine. It takes a lot of sharp "tuning" to make a 150-hp engine deliver 150 hp!

**TORQUE @ RPM** — "Torque" refers to a *turning effort*, the kind that you would exert on the end of a wrench or crank. It is measured in *pounds of force* at a distance of one foot from the axis or center of rotation, and is expressed as pounds-feet of torque. In other words, 400 pounds-feet of torque would be equivalent to a force of 400 pounds exerted on a crank with an arm one foot long. An engine develops its maximum torque in the *medium* rpm range where the breathing is best — the pistons are gulping their biggest charges of fuel-air mixture — and the internal friction holding back the engine is relatively low. Hotter camshafts tend to show maximum torque at higher rpm's.

The torque rating is important in comparing engines for low-speed acceleration in high gear, when the driver does not "kick down" or downshift to wind up more rpm's. The high-torque engines are peppier around town in high gear, especially if the rpm at which maximum torque is developed (the second figure in the column) is relatively low. But it should also be pointed out that the stock engine will not approach the advertised torque figure on the road for the same reasons that actual delivered horsepower falls short; laboratory test conditions are ideal, while conditions are anything but ideal in an engine compartment of an operating car.

**DISPLACEMENT** — Both horsepower and torque that an engine can develop depend heavily on the volume of fuel-air mixture that it can burn in one revolution of the crankshaft. This, in turn, depends on the size and number of cylinders. The specification that measures relative engine size is the "piston displacement" — expressed in cubic inches. This is the volume displaced, or swept, by all the pistons as they move down from the top of the stroke to the bottom — and would obviously be the theoretical volume drawn in by the cylinders on their respective suction strokes. It can be readily calculated by taking the area of the cylinder bore, multiplying by the stroke, and then multiplying by the number of cylinders. Displacements of 1961 U.S. engines vary from 144 cubic inches on the small Falcon to 430 on the Lincoln. Although big cubic inches generally mean more engine performance, they also mean more fuel consumption — and the bigger engines generally use more gas, even in light cars with low-speed axle gears.

**COMPRESSION RATIO** — Another very important factor in engine performance and fuel economy is the amount the fuel-air mixture is compressed by the piston before the spark fires and combustion starts. This determines how much work an engine gets out of each drop of gas and out of each cylinderful of fuel-air mixture; the more the engine compresses the mixture, the greater the expansion force on the power stroke. This is expressed by the term "compression ratio." This refers to the ratio of the *total* volume of the cylinder and combustion chamber when the piston is just starting up on the compression stroke, to the volume of just the combustion chamber when the piston is at the top of the compression stroke. In other words, if cylinder volume or displacement is, say, 40 cubic inches, and the combustion chamber volume is five cubic inches, then *total* cylinder volume would be 45 cubic inches — and the compression ratio would be 45 divided by 5, or 9-to-1.

A high compression ratio is not all gravy. The very high combustion pressures and temperatures may cause the fuel to explode instantaneously, instead of burning smoothly, or ignite from hot deposits in the chamber — causing engine knock and rumble that can be both annoying and destructive. These problems get worse when ratios go over 10-to-1. Expensive premium fuels are required for these engines; for regular gas the compression ratio should remain below 9-to-1.



# SPECIFICATIONS

**CARBURETION** — This column gives the number of carburetors and the number of barrels in each one. This is a rough indication of the relative amount of breathing capacity supplied by the carburetion. The more barrels to breathe through, the more efficient the breathing at high rpm, and the more the horsepower (providing there is a cam with timing to take advantage of the breathing). Note that the standard and economy engines have only one or two barrels; the power packs have one, two or three carburetors with four, six or eight total barrels.

But this is important — more carburetor barrels do not necessarily mean more mid-range *torque*. An engine doesn't need that big breathing capacity in the mid-speed ranges, in fact it can't use it — and the huge barrel area just impairs the fuel atomization and distribution of liquid fuel between cylinders. Other factors being equal, very often an engine will develop more torque with a two-barrel carb than with a four-barrel! And, of course, additional carburetion generally means more gas consumption. Some modern multiple carburetion systems have some of the barrels closed off at cruising speed; but, even then, a little pumping of the throttle to enjoy some of the extra performance will eat up all the gas saved!

**AXLE RATIOS** — The axle ratio is a very important factor in car performance. This refers to the number of revolutions of the engine (in high gear) for each revolution of the rear wheels. The higher the ratio in numbers, the faster the engine will turn at a given road speed; this means the engine will develop more horsepower when the throttle is depressed at this speed — and acceleration will be improved. On the other hand, the faster-turning engine develops more internal friction, and it takes gas to overcome this friction, whether the throttle is wide open or almost closed. Thus gas consumption will be greater with a high axle ratio, not to mention the additional noise and vibration from the faster-turning engine. But an important point — the effect of the high axle ratio, fuel consumption and noise and vibration, is noticed mostly on the open highway. Around town it makes little difference — and yet the car still has the benefit of the extra pep and acceleration. Drivers who do most of their driving in city traffic might consider one of the optional higher axle gears.

There generally are significant differences in the standard ratios for automatic and manual transmissions. Automatics can use lower axle ratios since there is instant hydraulic torque multiplication right at the tip of the driver's toe all the time, by just pressing the accelerator down an inch or so to accelerate a little. With a manual box it's necessary to shift to second gear to move quickly, which isn't always practical if passing another car on the road. So the engineers have to put higher gear ratios in the sticks. This is one reason they go better.

**LENGTH, WIDTH, HEIGHT** — These represent the *overall* external dimensions of the car in question, and would include protruding items like door handles, bumper guards, etc., where they apply. Dimensions are for the standard four-door sedan body unless otherwise specified (see notation below the tabulation). The body height figures are measured with a *full design load* in the car — which would be six passengers in most cases. This means the springs would be compressed maybe one or 1½ inches more than with a load of driver only. Keep this in mind when comparing these height dimensions.

**WHEELBASE** — The wheelbase is simply the length measurement between the centers of the front and rear wheels. In

general, a longer wheelbase gives a more pitch-free ride; but the science of suspension design has made so much progress in the last 10 years that wheelbase length is no longer as important a consideration in ride. On the other hand, a shorter wheelbase gives a more maneuverable car — one that can turn in a smaller circle, turn sharper with a given angular deflection of the front wheels. The dividing line between "big" and "compact" cars now seems to be at about a 112-inch wheelbase — but the trend is definitely downward in this dimension, and in five years there may be no such thing as a 120-inch wheelbase.

**TREAD** — The tread measurement refers to the width between the *centers* of the wheels, front and rear. The front and rear treads are generally different due to space problems in laying out suspensions, steering and body seating. The wider the tread the more lateral (crosswise) stability that can be built into the car without using excessively stiff springs, because the wider support points give more leverage about the centerline of the car. Pontiac has had good results with very wide treads. However, maneuverability does suffer somewhat as tread widens.

**ROAD CLEARANCE** — The road clearance is the distance between the road and the *lowest point* of the chassis (except the wheels, tires and brakes). This dimension is important with cars on back country roads, but is of relatively minor importance in normal driving.

**TURNING CIRCLE** — This is the diameter of the minimum circle the car can turn in with the front wheels cramped over to full lock. The diameter is measured to the *outside* of the outside front tires, so it would represent the minimum distance between two curbs that the car could swing around in. The "wall-to-wall" turning circle, measured at the outside of the body, would be a little larger. The minimum turning circle is determined largely by the car's wheelbase, width between steering spindles (roughly proportional to tread width) and the maximum angle through which the front wheels can be steered — which, in turn, depends on clearance problems around linkages, wheel wells, etc. Short-wheelbase cars have a big advantage.

The minimum turning circle is an important factor in the overall maneuverability of a car. Admittedly cars are not often steered with the wheels cramped over to full lock; but this turning circle figure for a car is more or less proportional to the turning radius (or diameter) with *any* given angular deflection of the front wheels. It's a rough measure of the response of the car to steering "inputs." Consider it carefully.

**SHIPPING WEIGHT** — The shipping weight figures listed in the specifications must be carefully interpreted. When a new car comes off the assembly line it has a full load of lubricants (crankcase, transmission, rear axle), water in the cooling system and one or two gallons of gas in the tank to drive it to the freight loading point. If the car is shipped on a haul-away truck it will be shipped at this weight, with gas and water in it. But when it is shipped by rail the gas and water must be drained out — and it's this weight without gas and water that goes into the books as the "shipping weight." It's an age-old practice that has stuck. The normal "curb weight" — with partial or full tank of gas, water and no passengers — will generally be 100 to 150 pounds above the listed shipping weight, maybe even 200 pounds. For instance, on the standard Chevrolet four-door sedan, tables show a shipping weight of 3500 pounds. The curb weight for this model is 3660 pounds, or 160 pounds more. Keep this in mind when studying shipping weights.

/MY

*A monthly summary  
of the latest foreign  
car news from our  
overseas correspondents*



Gordon Wilkins



Gunther Molter

## trends OVERSEAS

**THE BRITISH** motor industry has come up with another budding merger. For some time now, it has been clear that the Standard-Triumph International, the smallest of the big British car manufacturers, has needed a partner to help in fighting the ever-increasing competition in the motor industry. Rumors spread that there might possibly be agreements with Rover, BMC, or Chrysler; but no one mentioned Leyland Motors, the great heavy truck manufacturer. Leyland has just offered an exchange of shares, which is equivalent to buying STI for 18 million pounds at current market prices.

If this agreement is culminated, it would make available to the public a complete range of vehicles, from the smallest to the largest heavyweights, such as only a few others are able to offer, such as

General Motors, Daimler-Benz, and with a less extensive coverage, Renault. Leyland already owns Scammell and Albion.

The new STI factory at Liverpool will cost 7 million pounds and it is not far from the Lancashire factories of Leyland. Logically they would increase the production of commercial vehicles, especially ¼- and two-ton vehicles, which STI already makes in limited quantity. If this merger goes through, it might well mean that STI directors will find the atmosphere more conducive to the production of several new and interesting models now in the planning stages.

**THE MANAGING DIRECTOR** of Elva has announced that Elva has built 140 front-engine Formula Junior single-seaters with BMC or Auto Union engines and has ex-

ported 80 of them to the U.S. For 1961, this car has been modified, with improved rear suspension and a more inclined seat for the driver, which makes it possible to eliminate the transfer gears and so save the weight, cost and power losses which they entail. The price is reduced in consequence, and a kit of parts, including BMC engine modified and ready to race, is available at 895 pounds at the factory.

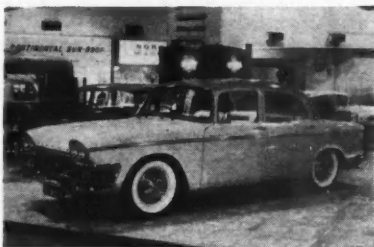
For 1961, there is also a new rear-



*Germany's new Taunus 17-M (sedan, left; wagon, above) has been completely restyled with aerodynamic principles as a guide. Whether the car will be imported or not is still a matter of speculation.*

*A new name in Italian coach building, Ellena, is making this attractive coupe for the Abarth Fiat 2200. The car was announced at the recent show in Turin.*





The new Humber Super Snipe (with four headlamps) is slightly longer and has much improved engine.

engined Formula Junior machine which will serve as the basis of a new 1500 cc Formula I racing car. They are convinced that it is the strongest car that they have ever built, but expect to have some difficulty in bringing the weight up to the minimum laid down in the new formula.

— Gordon Wilkins

\* \* \* \*

**FROM GERMANY**, the latest news concerning the new Ford Taunus 17-M with four-speed gearbox is its radical aerodynamic design, which is very sporty looking. The style, which shows a complete revamping, is more functional than the Fiat or Opel or even the new Mercedes. The design of the latter three is more costly from the standpoint of power and fuel, but the new Taunus, in departing from this trend, has a very low drag, which gives it added economy. In addition to this feature, it has the best visibility of any of the German cars.

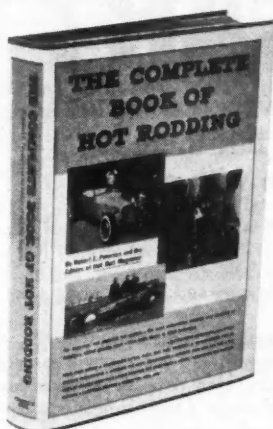
**THERE'S INTERESTING NEWS** from Porsche with the announcement that the German firm of Karmann, which produced the Karmann-Ghia coupe on a VW chassis, will produce the Porsche bodies. Also, the development for the new Formula I engine is concentrating on an eight-cylinder horizontally-opposed design after studies with a Six. It is air-cooled. Porsche hopes to reach a power output of 200 hp not only for racing, but also for its Carrera sedan, which will come out some time after the 1.5-liter racing version. — Gunther Molter



The Le Mans Lynx has a Ford Zephyr engine, tubular chassis, disc brakes. Bumpers are gold-plated.

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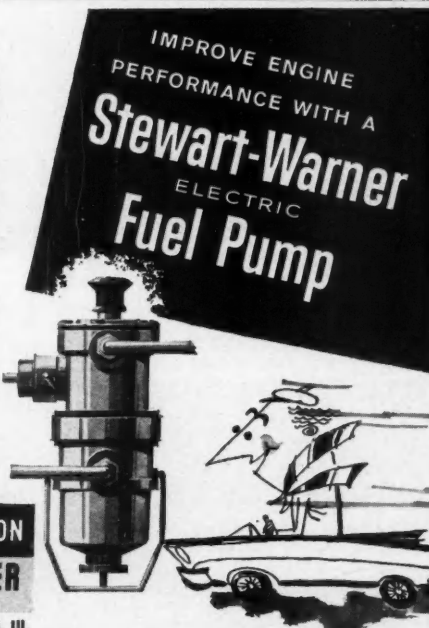
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IN THE APRIL ISSUE OF MOTOR TREND...  
**BIG...BIG 95 CAR COVERAGE**  
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# HOW FAST IS YOUR CAR?

the one big question of every car owner that's rarely answered....but there is a way to reach the solution with safety

by Dean Parker

**DO YOU KNOW** the top speed of your car? Out of perhaps just natural curiosity, everyone is interested in this question, which has been mostly an academic one for the last five years, as far as stock cars are concerned. New state-wide speed limits, crowded highways, and the terrific performance potential of late high-horsepower models make it that way. In other words, it's not even safe to try it

these days—and they won't let you anyway.

The true car enthusiast especially wants to know how fast his car will go despite these facts, even if he never takes his car over 70 mph. Comparing stock car lap times on very fast race tracks is of dubious value because these cars are modified by experts; there is little correlation between such performances and those of the aver-

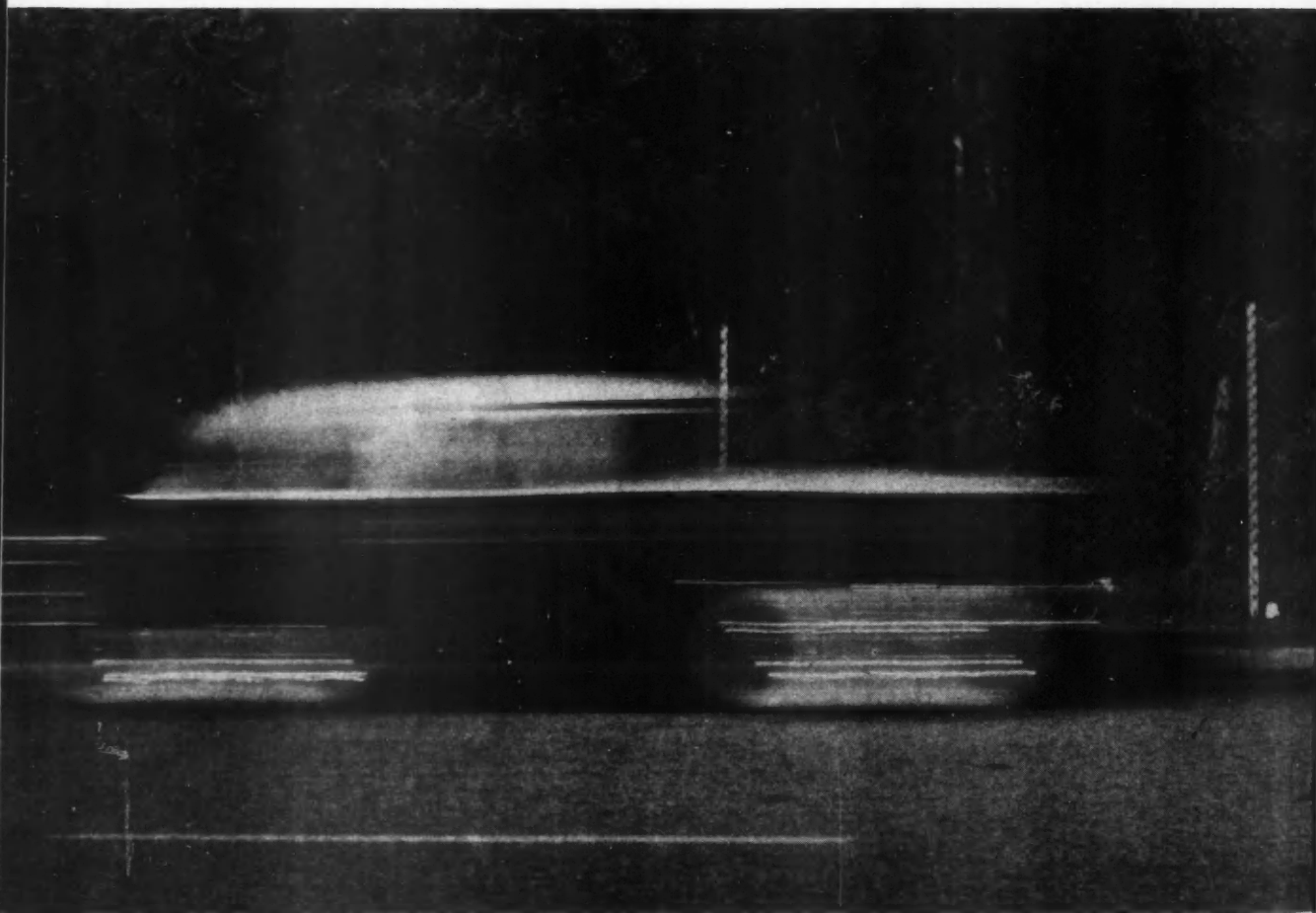
age showroom model.

So apparently there's only one way out—the old slide rule....

Estimating the true top speed of a given car on paper is probably as much an art as a science, so you're going to have to swallow my word for a lot of steps here! But there seems no other way.

Essentially what we must do first is to determine the actual horsepower the engine is delivering to the clutch on the road. The approach I have used is to actually test the car with an accelerometer instrument, reading against a calibrated speedometer, and then calculate the true horsepower output on the slide rule. Or another gimmick for untested cars is to take that car's drag strip speed, read the corresponding weight/horsepower ratio off my graph, and calculate the horsepower by dividing the weight by the weight/horsepower ratio. By using both of the above methods and cross-checking the result between them, we can come very close to the true horsepower output of any of the 1961 cars.

Once you calculate the actual horsepower, the true top speed can easily be determined by matching the available



horsepower with the required horsepower as determined by the car's wind resistance, tire-rolling resistance, running gear friction, gear ratio and weight. We have more help here in the air-drag figures released by Detroit on the 1960 bodies and the tire companies' figures on tire-rolling resistance at various speeds and inflation pressures. Also we know that running gear friction will consume very close to 10 per cent of the horsepower going to the wheels. Finally, in order to have top speed, we should have an axle-gear ratio that will have the engine winding right at the peak of the horsepower curve at maximum road speed.

If the car requires 220 hp at the clutch to push it down the road at 115 mph, and if the engine develops a maximum of 220 hp at a crankshaft speed of say, 4400 rpm, then we will need an axle ratio of about 3.1-to-1 to give us that 4400 rpm at a road speed of 115 mph. In these calculations, therefore, I assume an optimum-speed gear on the highest horsepower engine option for each make that can be ordered from the factory, plus factory-recommended tuning and showroom trim, with standard tires inflated to 28 pounds.

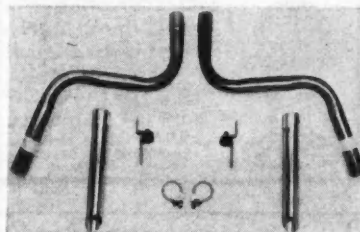
Due to all of the above factors, it is apparent that there is very little correlation between advertised horsepower and top speed. There's a fairly close relationship between actual horsepower and speed on the big cars because air-drag and rolling resistance don't vary widely among the different makes. For instance, although the Chevrolet and Chrysler both have 310 actual hp, the Chevrolet has two mph greater top speed. The honor of the most powerful U.S. engine in actual speed would seem to fall to the new 390-cubic-inch 375-hp Ford Interceptor, which appears to put out about 330 hp for top speed at sea level of about 132 mph. Chevrolet and Pontiac are right behind at 130, followed by Chrysler's apparent best, which would seem to be the 300-G at just under 130.

Fastest standard showroom model (no power pack) would seem to be the Cadillac at 118 mph. The Corvette is not the fastest U.S. production car, even with the optional 315-hp fuel injection engine. Fastest of the compacts would seem to be the Rambler with V-8 power-pack kit, which hits 108 mph.

You argue it out from here!

Make	Advertised Horsepower	Actual Horsepower	Top Speed
Buick .....	325	230	115
Buick Special .....	155	100	98
Cadillac .....	325	250	118
Chevrolet .....	350	310	130
Chrysler 300-G .....	400	310	128
Comet .....	101	80	90
Corvair .....	98	87	96
Corvette .....	315	260	130
Dodge .....	330	280	124
Falcon .....	101	80	90
Ford .....	375	330	132
Lancer .....	145	120	103
Lincoln-Continental .....	300	240	115
Mercury .....	300	220	113
Oldsmobile .....	325	240	117
Oldsmobile F-85 .....	155	100	98
Pontiac .....	348	320	130
Pontiac Tempest (4 cyl.) .....	155	130	104
Rambler .....	215	160	108
Rambler American .....	127	97	95
Studebaker Hawk .....	225	170	111
Studebaker Lark (V-8) .....	195	150	105
Thunderbird .....	300	220	115
Valiant .....	101	95	95

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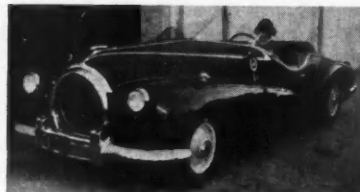


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AUTOMOBILE LITERATURE — Sales catalogs, instruction books, many makes '37 thru '42; some postwar catalogs; Motor magazines '32 thru '47. Catalogs \$2 & up. Send 10c for lists. Morton Weisbord, 10151 Babbitt Ave., Northridge, Calif.  
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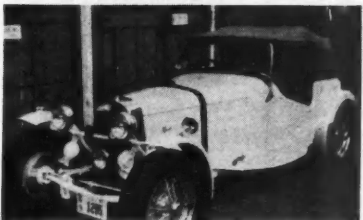
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'37 FORD 1/2-ton pickup with stake body. Orig. thruout — orig. paint, 37,000 orig. mi.; 1 owner. Drive anywhere. Nathaniel Adelstein, 1700 Calhoun St., Trenton 8, N. J.

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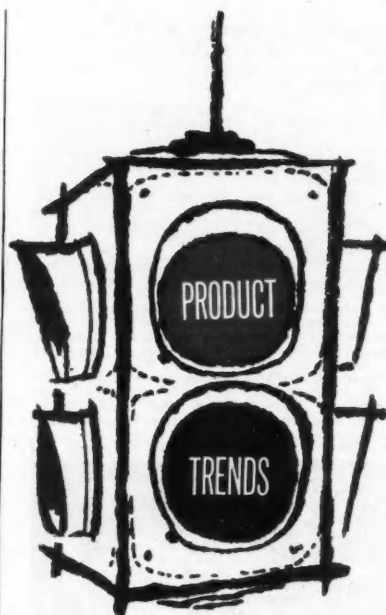
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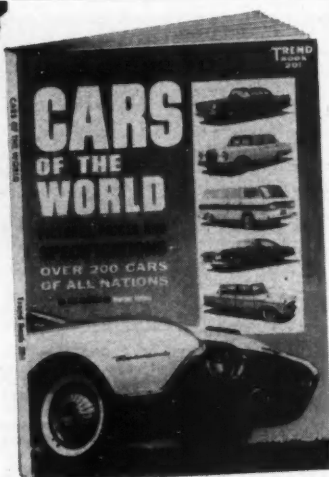
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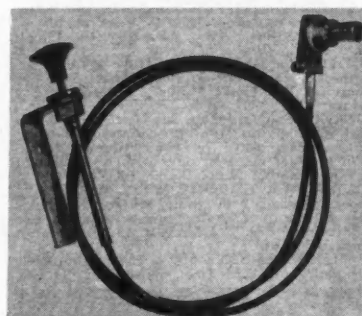
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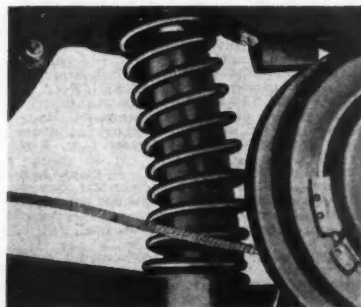
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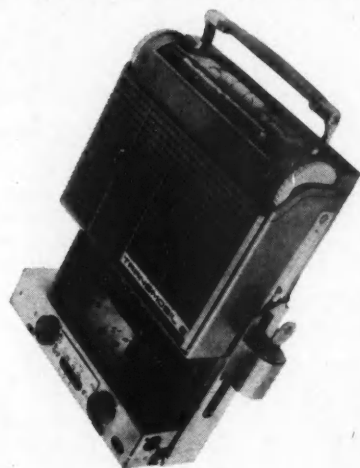
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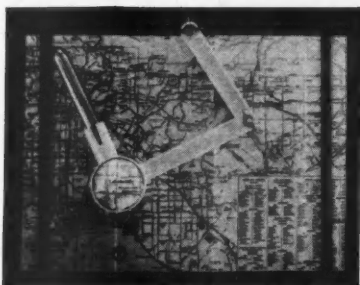
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A NEW DEVICE for hydraulic brake systems has been developed by Do-Mor Brake Engineering Co. Called the Do-Mor Brake Equalizer, it hydrostatically balances the uneven pressures that are fed back into the hydraulic system from unequal wheel braking systems. It is available for either regular or power



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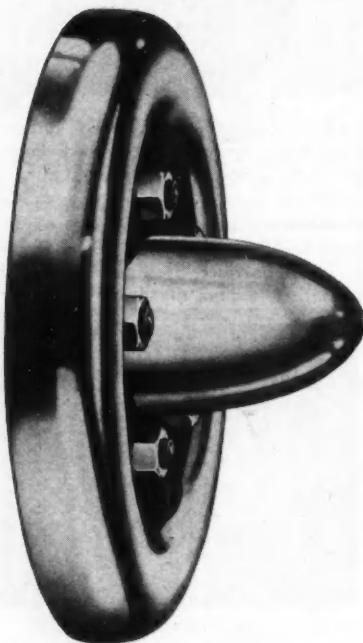
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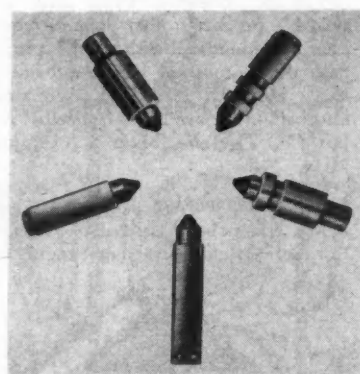
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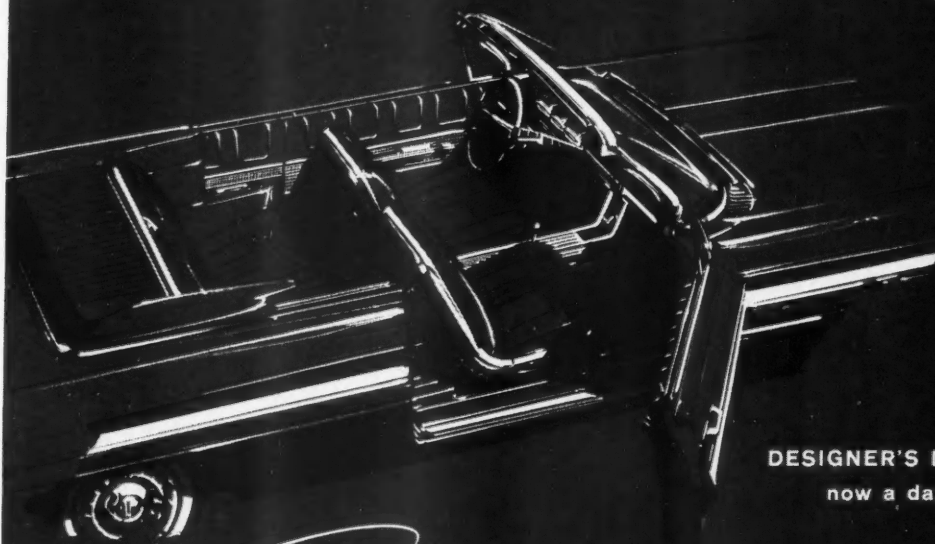
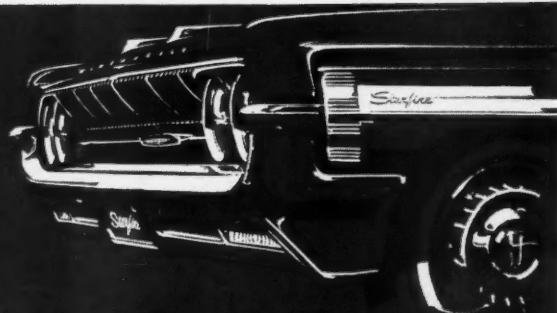


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3. Prize winners will be selected in random

drawings on or about April 21, 1961. Drawings will be conducted by D. L. Blair Corp., an independent judging organization. Its decision, with respect to all phases of the Sweepstakes, will be final. Winners will be notified by mail approximately 30 days after final drawing.  
 4. First prize does not include lot or landscaping for house. First prize winner may elect to take cash equivalent of house (\$20,000). This election must be made within 60 days of notification. If winner chooses house a good lot must be provided within one year. No other cash equivalent prizes. Any tax or liability on any prizes will be the sole responsibility of prize winner.  
 5. Entries limited to residents 18 years of age, and older, of the United States and



